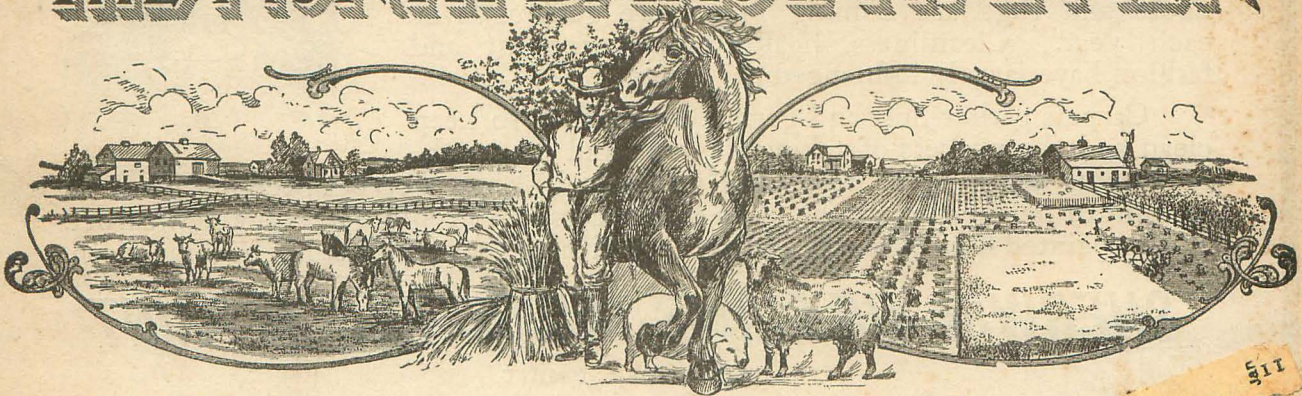


FARMERS' INSTITUTE NUMBER

THE NORTH DAKOTA FARMER



"THE NORTH DAKOTA FARMER FOR NORTH DAKOTA FARMERS"

Alex Alin

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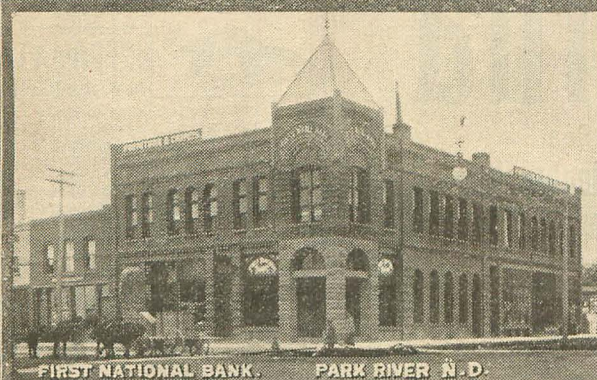
Vol. 11, No. 9
LISBON, N. D.

MARCH 15, 1910

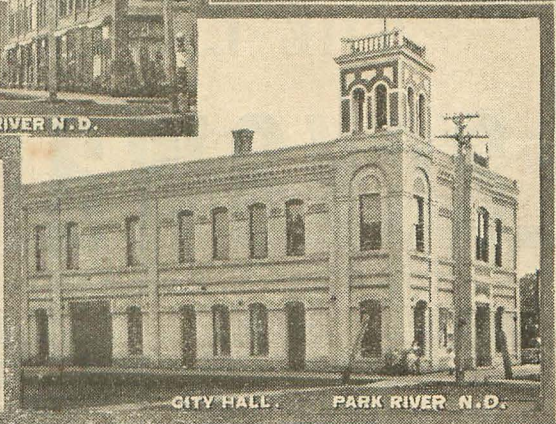
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MUSKRAT TRACK

See Awt Offer, Page 11--A Winner

THE NORTH DAKOTA FARMER

Vol. 11, No. 9

LISBON and FARGO, N. D., MARCH 15, 1910

50 Cents a Year

At the Farmers' Institutes

North Dakota Farmers Show Their Appreciation of Institute Privileges
by Enthusiastic Meetings

PARK RIVER

The farmers' institute held here was conducted by Supt. T. A. Hoverstad assisted by Mr. O. C. Gregg of Minnesota and W. C. Palmer of the Agricultural College Extension Department.

Supt. Hoverstad in opening the meeting spoke of the good attention and interest taken in the meetings here. And so while most of the meetings are one-day ones this year he felt justified in granting Park River a two-day institute.

He then introduced Supt. Gregg of Minnesota to discuss some general farm problems. Mr. Gregg started farming on a claim in southwestern Minnesota 80 miles from a railroad. He spoke of the changes, how now everything is being done by machinery even to the milking of the cow, while then very few tools and very crude were used.

The feeding was then largely a matter of filling the animal while today it is a matter of supplying the proper nutrients to supply the animal's needs.

Prof. Palmer was then introduced to discuss soil management. He spoke of how by means of proper soil management land is now raising crops that a few years ago was considered to have too little moisture. But now by a proper use of the moisture in these soils they have become very productive.

In carrying on experiments he found that land kept free from all growth and the surface kept loose that the moisture content of the soil remained almost constant, while adjoining land grown to wheat showed a larger decrease in moisture. Land grown to corn and well cultivated showed more moisture than the wheat ground, while land in corn and weedy was about as dry as it could be, the weeds pumping out moisture as well as the corn and there was not enough for both corn and weeds.

He illustrated how the moisture moves thru compact soil but can not move thru loose soil. So to have the best conditions for plants and especially the germinating seed, the furrow slice below the seed should be compact to allow moisture to come up and the soil above the seed should be loose to keep the moisture from passing up to the surface and escaping. A good implement is the sub-surface packer (Campbell's). While the rainfall here is but 18 to 20 inches a year an effort should be made to get it all into the soil and deep-plowing makes a larger reservoir for holding the water.

At the afternoon session Mr. Gregg took up corn culture. In opening his talk he made the statement that rotation of crops was necessary to good agriculture and to have a rotation corn is quite necessary.

Seed is the first consideration. Golden Dent is a good variety, and the changing of seed is apt to result in decreased yield. The seed grown in a locality is the best for that community. Select your own seed and select it in the field. Select a well-developed early maturing ear from a good-sized stalk, one that will cut well with the corn binder. Then dry it thoroly as if it freezes before being dry the germ will be killed. A good way is to hang it up or put it in a rack so arranged that the cobs can be placed on it without touching each other. A good place to put it is near a chimney or stove-pipe. The attic will often be a good place.

Fall plow the land; then harrow early in the spring to warm it up, to help germinate the weed seed. Just before planting disc thoroly to kill all weeds that have germinated. Plant in hills and have rows straight so that the 3-horse cultivator can be used. One man with three horses can cultivate as much as two men with the two-horse culti-

vator. When corn has been planted, harrow when it is up; either harrow or else go over with weeder to kill weeds. Cultivate shallow but thoroly. The shallow cultivation does not cut roots nor does it bring up a lot of new weed seed.

He also recommended going thru the field in August with a one-horse cultivator but shallow. This will kill a lot of weeds that would otherwise leave a weedy cornfield for the fall.

The superintendent discussed growing seed corn. Would select seed in field and select a good deal of it. Then out of these select the twelve best ears and plant on one side of field. Plant one row from each ear and mark both ear and row. Don't shell all the corn from ear. Then cut out poor stalks. When fall time comes husk each row by itself and weigh. Study the ears from each row and select seed from row that is most satisfactory.

Prof. Palmer then took up the growing of clover. He emphasized the fact that clover differed from other plants in this: that it adds to the soil the very things that grain growing exhausts the soil of. But also that it differed in this respect: that it needs to have a germ in the soil to live on its roots. These germs can be supplied the soil by taking soil from a field growing clover successfully and sowing at rate of 100 pounds per acre (such soil can be had from the Agricultural College by writing them, the receiver to pay freight) Sow a good deal of seed the first time 12 to 15 pounds per acre. An appreciation of stable manure is also very helpful and will also ensure a very vigorous growth. Barley is the best nurse crop. Sow it early and on fall plowing. Leave the stubble long and do not let stock get on to eat it down.

For hay cut when in full bloom; for

seed cut back some time in June, as first crop will not make much seed.

Mr. Gregg then spoke of his experiences in growing clover. He spoke of the elements that plants need and that there are three elements in which soil is apt to be lacking as the plants use a lot of these. He spoke of how the clover plant has a root that goes deep and brings up elements of plant food from below the reach of wheat and leaves it where the grains can get at it. It also adds a good deal of organic matter to the soil which improves its mechanical condition and also increases its water holding capacity. Then again the clover germs add nitrogen to the soil.

Supt. Hoverstad discussed alfalfa emphasizing that the plant is at first very tender, and needs good care. Not necessary to sow early; barley can be used for a nurse crop but cut it before ripe.

The best preparation for alfalfa is a clean cultivated corn or potato field and manure should also be added. Sow a good deal of seed. Twenty pounds makes a good amount. It does not need to be sown early. June 1st will be time. Use only northern grown seed.

At the opening of the morning session Supt. Hoverstad took up potato growing. He spoke of the fine quality of

North Dakota potatoes and that this fact is being known. And to keep adding to this reputation he suggested that nothing but the best potatoes be sent out. He spoke of the favorable winter for potatoes in North Dakota; i. e. favorable for keeping the seed from sprouting and vigorous.

Treat seed with formaldehyde, 1 pound to 30 gallons of water and let soak in this two hours. This will kill scab. Cut the seed potatoes into pieces with two eyes each. Plant in rows 3 to 3½ feet apart and 12 inches apart in row.

Prof. Palmer then discussed tree-planting. He stated that the first thing to do was to plant a willow hedge and to put it far enough from buildings so that snow will have room to lodge before reaching house. Plant two rows of willows on west, north and south side. Cuttings can be used and plant about a foot apart and cultivate so as to keep down grass and weeds which would take the moisture from trees. For forest planting he advised planting ash and birch.

Mr. Gregg then gave some of his experiences in tree growing on his prairie claim. He advised locating buildings so that there will be room for hedges on the north, west, and south sides and dis-

tance enough for the snow to lodge between hedge and buildings. He said that to raise stock protection was necessary and that the willow is best as it has branches close to the ground and also grows to a height of 30 to 40 feet.

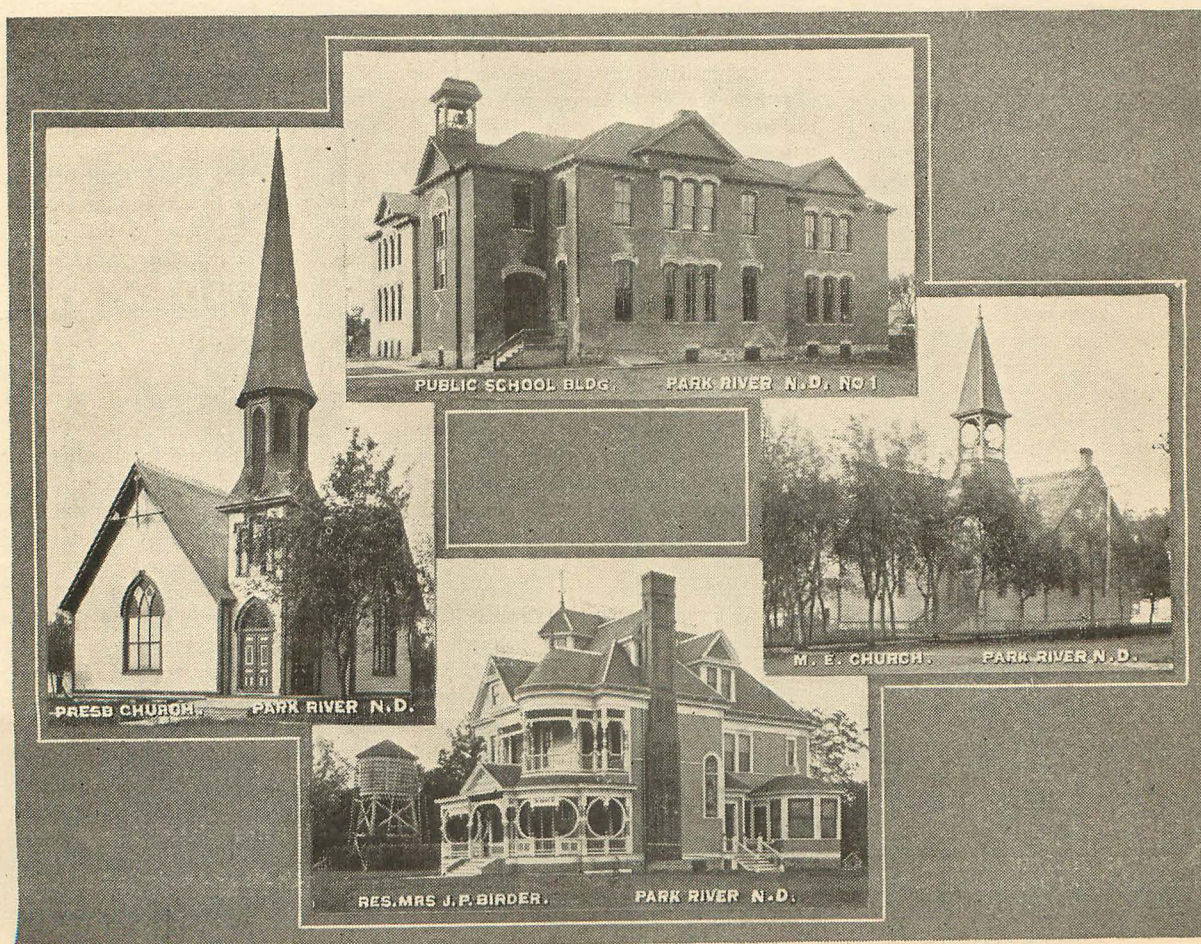
He also emphasized the value of evergreens; fine in winter and will grow very successfully.

Silo was Mr. Gregg's next subject. He emphasized the convenience of silo should have a cement foundation so that rats or rodents can not get in as air would come in thru their burrowing and spoil ensilage. For putting in and cutting ensilage he advised using a blower attachment. Use a 14-inch cutter, a good size. When filling, 8 teams can haul in the corn cut by one corn binder. A man should also be in the silo tramping.

Cut corn for silo when kernels have glazed. It is well to fill silo, then let ensilage settle for a few days, then fill again.

It is well to strew a sack of oats on top of silo. The oats will grow and form a protective covering, thus reducing the loss from decay.

Weeds were then discussed by Prof. Palmer. He stated that rotation of crops was about the best way to kill weeds. Grain growing is conducive to



weeds as the weeds ripen before the grain and fall on to the ground; then in plowing the seeds are buried. Hence raise crops that can be harvested before weed seeds ripen. Corn is a good cleaning crop. Fall plow, harrow early so as to germinate weed seed; disc before planting corn; clean; cultivate corn, then sow to clover with barley as a nurse crop and after one year of clover plow up and back to corn to clean other side of furrow slice.

Mr. Gregg then took up cattle growing. He emphasized the need of breeding. In dairy cattle milk is wanted; and food is the material out of which milk is made; hence, the dairy cow needs to have a large stomach or middle piece which indicates the ability to eat and digest a large amount of food. A large soft udder is also a good indication. The blood from the udder passes back to the heart thru the milk veins and wells, hence, if these are large it indicates a large flow of blood.

The dairy animal should also have a spare form as indicated by sharp back and prominent bones. A large clear eye indicates a good nerve system which is the driving power and a lot of it is needed in the dairy cow.

The attendance was good. Free dinner was served to all who attended.

SHARON INSTITUTE

Notwithstanding the weather today was like a March bluster, the farmers' institute held at Sharon, N. D. was well attended and the audience showed the very best of attention while O. C. Gregg explained Dairy Cow and its Keeping and Mr. Hoverstand instructed them upon the subject of Clover and Alfalfa. Mr. A. N. McKellips, of Blabon, N. D., was listened to a few minutes in explaining his plan for a co-operative cold storage plan, to be erected at Fargo, N. D. The writer has had quite an extensive acquaintance with this promoter, having known him to be a very successful farmer. We think his plan a good one, as his idea is to get the farm products of North Dakota to the best existing markets as quickly as possible.

C. H. S.

CORN AND CLOVER CONVENTION, GRAND FORKS, FEB. 22 AND 23

The Corn and Clover Convention which assembled here marks a new era in North Dakota farming. It was learned from the discussions that corn had been grown in North Dakota for the last thirty years and Mr. Gregg, Father of Farmers' Institutes in the Northwest, made the statement that he had traveled all over the state the past year, and had found fine exhibits of corn at all points, and stated that North Da-

kota was destined to become famous for her corn as well as for wheat, and that he was impressed with the maturity of the corn he had seen, and while the ears were smaller than those in the so-called corn belt yet more stalks can be grown per hill.

Supt. Hoverstad stated that in his travels over this state he found clover growing successfully in all parts and in some places he had seen phenomenal crops of clover and that it produces unusually large amounts of seed and of the finest quality.

With these two crops an assured success North Dakota is passing out of the one crop system, and is beginning to rotate her crops and to reap the larger yields that comes with this system of farming.

Very much interest was also shown in stock, which inevitably follows in the wake of corn and clover. North Dakota is passing from an agriculture which it is exploiting to one that is permanent and enduring.

Supt. Hoverstad, in opening the meeting, spoke of the changes that had taken place in this state. He related how the rapid settling of the state, the cultivating of the soil seems to have had a very happy result in that it reduces the effects of the winds that in early days were so disastrous. He attributed this to the fact that when the land is broken up the rains soak down in the soil instead of running off as was the case on the prairie; hence there is now more moisture in the soil so that the plants have greater power of withstanding adverse conditions, and again, this increased moisture in the soil gives the plants more to evaporate, which perhaps has an effect in increasing the moisture content in the air.

Corn was discussed by Mr. Gregg, who emphasized the necessity of having strong, vigorous seed, which is half the battle in raising a good crop of corn. He said that it should be selected in the field, should be thoroly dry, should be planted on fall plowing which had been harrowed early to warm it up to germinate the weed seeds and thoroly disked before planting to kill all weeds. He advised planting in hills and cultivating shallow but very thoroly.

Prof. J. H. Shepperd of the Agricultural College then took up the subject of "Corn Culture" and outlined the method of ear-row selection, which is as follows:

In the spring time select out, say a dozen of the best ears from the seed corn. Plant about half the corn from each ear in a row by itself, numbering both the ear and the row. Detassel the weaker stalks; in the fall harvest and weigh the corn from each row separately, also examine the ears very carefully and select corn from the best row for seed. Continue this process which, while it is

quite a simple method, is very effective in improving the quality of the corn. This method has been carried on by L. S. Thorpe of Mayville in raising the champion corn of the state.

Clover was the next subject. Prof. J. H. Shepperd, in opening the discussion, spoke of the clover plant as needing the assistance of a germ before it could grow satisfactorily, and that a good way to introduce this germ is by taking soil from a field growing clover successfully and spread it at the rate of 200 pounds to the acre and harrow it in. He also stated that the land should be fall plowed and that if it had been corn ground manured it would be still better. Barley makes a good nurse crop, when it should be sown early in the spring, and in the drier sections of this state a bushel per acre would be better than a full seeding. In cutting the barley leave the stubble long and do not pasture in the fall.

Mr. Gregg then carried on the discussion and related the number of elements that were in the soil and that a crop needs, stating that the land is apt to become exhausted in three elements, nitrogen, phosphorus and potash, as the plants use a great deal of these three elements. The clover plant, however, by means of the germ, adds nitrogen to the soil and by sending its roots deep into the ground brings up potash and phosphorus from the lower layers of the soil that the grain crops do not reach and that it leaves them in the roots and stubble near the surface. The clover plant is also valuable in that it leaves organic matter in the soil which loosens it up and makes the soil much more mellow.

Col. Wilkinson of Lake Elmo, Minn. then took up the discussion of the value of clover as a forage crop. He stated that the hay was one of the most valuable that could be grown, that it was especially good for all kinds of farm stock when cut at the right time and properly cured. He also emphasized the fact that clover hay grown in North Dakota is richer in food value than that grown further south. He stated the fact that has been well established that all crops when grown north are richer in food value than when grown in the south, and that as a result a higher type of animal life can be developed on such food.

Prof. Brannon of the University gave an illustrated lecture on "Bacteria" and showed by means of stereopticon views how the bacteria live on the clover root, what they look like and also called attention to the rapidity with which they develop, and that the clover plant is powerless to grow when it is without these germs which live in the nodules on its roots. He also showed illustrations of the nodules formed on other members of the clover family.

On the evening of the 22, Pres. Worst

of the Agricultural College gave an address on "The Life and Character of George Washington." He brought out in a striking way the wonderful courage and unwavering faith of George Washington. The wonderful perseverance that carried him thru difficulties so tremendous that all about him gave up; that his courage always seemed to rise to meet the occasion and that the successful outcome of the Revolutionary War can only be attributed to George Washington. When the war was over he rendered perhaps an equal service in his part in bringing about the writing and adoption of the constitution which has held this nation together these many years. So it is fitting that we should set aside a day to turn our thoughts back to this man who has given us a free country with a constitution capable of holding it together.

Mr. Eastgate also gave an illustrated lecture on "Birds," in which he gave fine illustrations of practically all of the birds of the state and commented on their economic value, some being good and others bad; tho North Dakota has but few birds but what are beneficial.

A good deal of the time was given up to discussion, and the experiences related by those who had grown corn and clover successfully were very hopeful.

While this is the first meeting of the Corn and Clover Convention, it went off so smoothly and was so well attended that one would be lead to think that there had been several before to pave the way for this one.

WIMBLEDON

The farmers' institute at Wimbledon was attended by a large and interested crowd of farmers and their families, the day being pleasant and all very much appreciated the speakers. O. C. Gregg discoursed on corn and the cow; W. C. Palmer on trees for shelter and protection; Prof. Hoverstand on various subjects pertaining to diversified farming and the means of destroying noxious weeds.

LARGEST FARMERS' INSTITUTE IN NORTH DAKOTA

The Farmers' Institute held at Cavalier Feb. 11-12, was the largest held in North Dakota, except the Tri-State Grain Growers' Convention held at Fargo, and has been ever since it was started. The Cavalier Commercial Club is a good live one, and devotes a great deal of its time and attention to the Farmers' Institute. They advertised the meetings widely, furnished free lunches to all who attend, and on Friday evening, a free banquet was provided for all. A large hall has been furnished. It will be enlarged, as it cannot accommodate

the large attendance. Music was furnished by the High School Band and orchestra.

The institute was conducted by Superintendent Hoverstad. He was assisted by Ex. Superintendent Gregg of Minnesota, and Professor Palmer of the Agricultural College. President Worst came up on Friday, delivered an address on Lincoln in the evening, and also stayed over Saturday and took part in the meetings.

Addresses were made on a number of topics, but the one that attracted the most attention was Supt. Gregg's talk on corn. Among other things he emphasized a careful selection of the seed. He also advised selecting it in the field, and from a stock that carries the ear in a good position. Also select an ear that has a fairly strong shank and one that holds its diameter well towards the tip. Early maturing ears should also be selected. He stated that it was essential that the seed corn be thoroly dried, as if it should freeze before drying, the germ would be killed. The best way to dry this corn is to place it in a rack which can be made from 2x4's with lath nailed on both sides, and the corn should be laid across in such a way as not to have the ears touch each other. This allows of the most perfect drying out, and hence, makes the most valuable seed corn. This rack should be placed where the corn will dry out,—near a stove pipe or chimney in the attic. This makes a good place for drying out where only a small quantity is to be cured.

He recommended fall plowing for corn, and to harrow as early as possible in the spring in order to warm up the soil and start the weeds growing, and then harrow it at intervals until near time for planting, when the ground should be thoroly disked to kill all weeds that may have germinated. He laid particular stress on having the rows straight both ways, so it would be possible to use a three-horse cultivator, which is a labor-saver, as one man can do as much work with three horses as two men with four horses, when using the two-horse cultivator. He also advised harrowing at intervals the corn after it was planted, until it was up about three or four inches, but to use a harrow with slanting teeth. Also that it was a good plan not to begin harrowing until the sun was up, quite a way as the corn will break off then less easily than on a cloudy day, or early in the morning. Shallow cultivation should be practised, as the corn grows quite near the surface, and deep cultivation would cut a number of roots, and again, deep cultivation stirs up the weed seeds buried in the ground. With practising this shallow cultivation, the corn can be cultivated until along in August. It would be necessary, however, to use the

GRAND 5-YEAR OFFER, PAGE 20

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The subject of President Worst's address was, "Lincoln, a Man of Destiny." He went back to the founding of Jamestown, and the purchase of some slaves by the Jamestown colony in 1619, being the starting point of slavery. In this connection he also spoke of the Plymouth colony, established in 1620, as containing the spirit of liberty that finally broke the back of slavery. He spoke of Samuel Lincoln, who, born in England in 1619, came to this country when 18, and settled at Salem, Massachusetts, living there for a number of years. The sons of Samuel were members of Congress and held many prominent positions, as also did his later descendants.

In 1858 the great crisis in the political situation came. Should slavery be extended? It was at this time that he went on the stump with Douglas. In this series of famous debates, Lincoln came out easily a victor. His contention was that the country must be either all slave or all free. It was at this time that he was called to New York to deliver his famous address at the Cooper Hall Union. This introduced him to the nation, and resulted in his nomination and election to the presidency. Who could have seen in the ungainly youth in the Indiana woods, or in his home on Sangamon River in Illinois, any indication of the great power that was wrapped up in this man? Yet, with all his gentleness and kindness, he directed battles and saw the men of his nation go down to the battlefields to be killed. He saw them carried to the hospitals,—to the grave. Yet he never faltered in his duty. Could he have done these deeds if he had not been led by divine power? Who can look back to Plymouth Rock and Jamestown, and then to the final outcome of slavery, and not say that there was divine leading in it all? Like so many leaders, he came from the very humblest ranks of life. Like the leader of the children of Israel, he was not allowed to enter the promised land, as when peace had been declared, he was struck down by the assassin's bullet.

This concludes the chapter in our nation's history that was begun at Jamestown and Plymouth Rock, and closed at Richmond and Petersburg.

AT HANNAH

T. A. Hoverstad, Superintendent of the N. D. Farmers' Institute, gave an address on poultry growing at the Hannah Farmers' Institute meeting, Feb. 14. A short review of it is given below.

My first observation was that the hens would lay in the summer but not in the

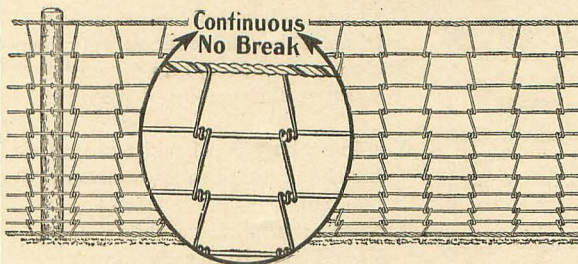
winter. The question then came, why? One condition that differs in summer and winter is "temperature." It will not, however, be necessary to maintain a summer temperature in winter. In fact all that is necessary is to keep the temperature uniform and above freezing. There are several ways of building. Double walls with straw between, plastered, and the single wall with paper have all proved satisfactory. The plastered house costs more but is very good. It is easy to keep sanitary and holds the heat well. The Agricultural College at Fargo is working out some experiments on the best and cheapest way to build

hen houses and any one contemplating building had better write and get the latest information. The house should be raised a little above the ground so as to make sure of good drainage. A house 16x16 feet is a good size for fifty hens. If more birds are to be kept it is best to have a separate room for each fifty.

Light needs to be provided, and for the room 16x16 two windows, each with nine panes of glass 10x12 inches is very satisfactory, and they should be placed up so that the sun can shine far into the house. Too many windows are objectionable as the house will warm up too much in the day time and cool at

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Forty acres are an easy possibility with the REEVES STEAM MULTIPLE GANG PLOW.

The only really successful outfit is the

Reeves Flexible-Frame Steam-Lift Engine Gang Plow

because it does perfect work in all conditions of land. Flexible frame and running of plows in pairs gives REEVES PLOWS a great advantage over others. There are a dozen points of Reeves superiority.

WRITE FOR FREE BOOK

telling the whole story of steam plowing. Shows steam-plowing scenes and gives letters from steam-plow users.

REEVES & COMPANY

104 5th Street,

COLUMBUS, IND.



night, bringing about too much variation in temperature.

Fresh air is also very important and a good way to ventilate is to make an opening 1x2 feet and covering it with burlap. This will allow of the passing in and out of the air but will not allow any drafts. If this does not ventilate enough, as on a warm day, open a window and if the wind should blow make a screen and cover it with burlap and place in the open window.

Feed is another important consideration. In the summer the hens have free access to bugs, worms, green food and seeds and these or a substitute need to be supplied for the winter. Green bone cut up fine will serve for the animal food tho meat scraps are more convenient as they come in a form ready to feed. Mangels make a good substitute for the green food, they are easily raised and not hard to keep. In place of the seeds a mixture consisting of one-third wheat and the rest made up of barley and oats answers very well. A good way to furnish the wheat is in the bundle. If the grain is threshed, then scatter it among some straw so that the hens will have to scratch for it. Give a bran mash twice a week.

A box of road dust should be placed where the sun will shine in it for the hens to dust in.

Cracked oyster shells should be provided as it supplies shell forming material. Crystal grit will take the place of gravel.

Whitewash the inside of the poultry house at least once a year. Go over the roosts once in a while with a mixture consisting of nine parts kerosene and one part carbolic acid. Clean out the droppings every day and change the straw in the nests occasionally.

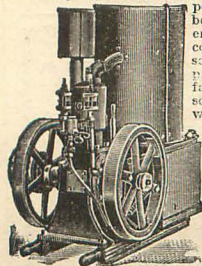
OUR AWL OFFERTAKES, PAGE 11

Try Kerosene Engine

30 Days Free

Gasoline Prices Rising.

You can't run a farm engine profitably on gasoline much longer. Price of gasoline going sky high. Oil Companies have sounded the warning. Kerosene is the future fuel and is now 3c to 10c a gallon cheaper than gasoline. The Amazing "Detroit" is the only engine that uses common lamp kerosene (coal oil).



perfectly. Runs on gasoline, too, better than any other. Basic patent. Only 3 moving parts. Comes complete ready to run. We will send a "Detroit" on free trial to prove all claims. Runs all kinds of farm machinery, pumps, saw rigs, separators, churns, feed grinders, washing machines, Silo fillers and electric lights. Money back and freight paid both ways if it does not meet every claim that we have made for it. Don't buy till you get our free catalog. 2 to 24 h. p. in stock. Prices \$20.50 up. Special demonstrator agency price on first outfit sold in each community. 2000 satisfied users. We have a stack of testimonials. Write quick. (20)

The Amazing "DETROIT"

Detroit Engine Works, 385 Bellevue Ave., Detroit, Mich.

When writing advertisers please mention the North Dakota Farmer.

OVER OUR STATE

UNCLE SAM TO COLUMBIA

FLOYD D. RAZE, ANAMOOSE, N. D.

(North Dakota celebrated the twenty-first anniversary of her statehood February, 22nd, 1910.)

Of age today—she's twenty-one,
A likely gal, you'd better bet!
That very gal has up an' done
A stunt that beats 'em all, as yet.

I'm proud o' all the forty-six—
I've watched their growth an' heard
their brags,
But press my shirt between two bricks
An' tear my handkerchief to rags

If this same lass don't beat 'em all
In ways that make fer queenly pose—
She's got the stately airs, by goll!
Without the turn-up of the nose.

You know how once her sisters smiled
An' shook their heads an' sighed, "Too
bad
That so unpromising a child
Should come from such a famous dad!

But ain't she changin' clothes! I vow!
You recollect her last year's dress—
Wall, that's her bathin' suit jest now,
A-growin'! Wall, I rather guess!"

She's growin' taller every day,
For grace she's mighty hard to beat,
She's growin' prettier too, an' say,
Columbia, she's growin' wheat.

"Rough occupation"? I dunno,
Whut 'ud you have her do instead?
By heck! I'm proud to have her show
The meanin' o' the term, "well bread."

I know they boast o' breedin' fine,
Our older gals, but I aver
That evry mother's gal o' mine
Is better bread because o' her.

HANNAH

By C. H. Sikes

Hannah, where a very successful institute was held on Feb. 14-15, is a town of about 1000 inhabitants in Cavalier county, at the terminus of the Larimore and Hannah branch of the Great Northern railroad, and is one and one-fourth miles from the border line of Manitoba, Canada. This town has been built since the year 1897, when it was named after the first settler and homesteader, John Hannah. Hannah has a public graded school employing five teachers and has besides many enterprising business firms and elevators. There are three churches. Presbyterian, Methodist and Holiness Movement. Hotel Davis is conducted in a creditable manner.

There are a Masonic, Oddfellow and Orange lodges. The city is governed by a justice of the peace and a constable. As there are no blind pigs or grog shops we find no criminal record here, hence, no expensive municipal government. The sanitary condition is as good as the average best. The inhabitants are mostly American and largely settlers from Canada. They are notably people of good morals. As the town is situated in the very heart of the fertile wheat and grain belt, it is safe enough to predict a bright future for its very estimable inhabitants.

OUR NEW COUNTY OF BURKE

No part of North Dakota has developed more rapidly than has Ward County and especially the northwestern part, which forms the new county of Burke. A very few years ago this was an undeveloped prairie, but today fine large buildings can be seen on nearly every farm.

The soil is a dark loam from two to three feet thick, with a heavy clay subsoil. This soil is unsurpassed by any in the northwest. It is productive of all small grains, vegetables and small fruits. Poultry, hog and cattle raising is fast coming to the front here, and many are making a success of raising corn. In this vast field of activity, while nearly all are good farmers, more men who do things, are needed to buy the farms that are for sale, those who can realize the boundless possibilities of this country. In a few short years this country will see no more cheap land.

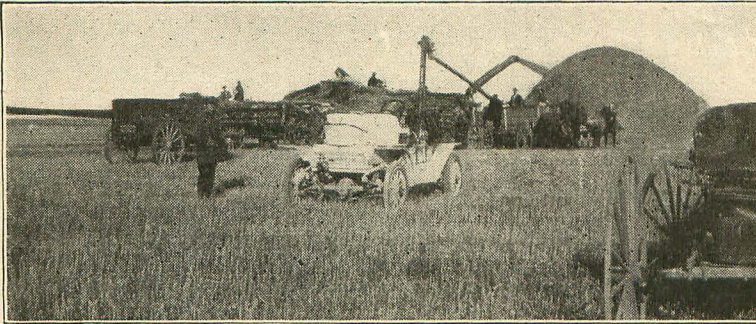
Just now farms in this rich valley can be had cheap (from \$15 to \$30 per acre) thus affording the man with limited means a chance to get started with the outlay of a comparatively small amount of money. The rainfall is sufficient to raise good crops, and the coal supply is everlasting, there being numerous mines that furnish coal from \$1.80 to \$2.50 per ton.

In the heart of this famous country

which is known as the Des Lacs Valley, is located the thriving city of Bowbells, the temporary county seat of Burke county. The city has a population of 800 and the business men are all pushers and in a short time expect to double the population. A new waterworks system and electric lighting plant are contemplated this summer. Other towns in the new county are Lignite, Coteau, Woburn, and Larson on the Great Northern, and Flaxton, Portal, Columbus, and Rival on the "Soo."

The educational interests are well

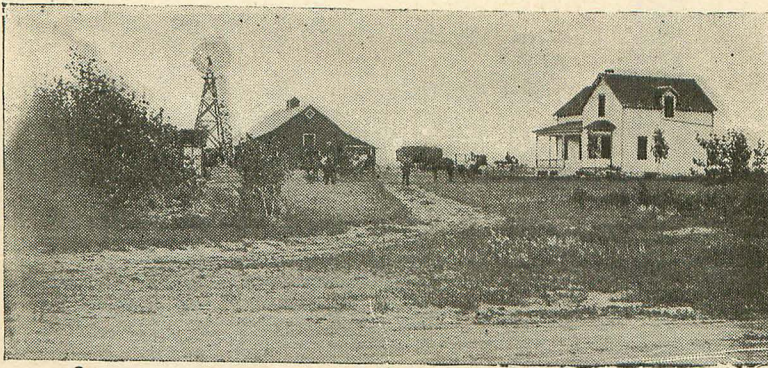
"A few days ago my company closed a deal for the Electric Mine Co.'s plant and property of Kenmare, consisting of over 1,100 acres, for which we paid a flat \$100,000. Just as soon as possible our expert will arrive here and take preliminary steps towards cleaning up the premises, planning the grounds, and getting the mine in condition. Then, as soon as the frost is out of the ground so as to allow us to lay our concrete foundations without danger of bulging or settling, that part of the work will be commenced, and the erec-



With the Automobile the Farmer Keeps Tab on his Grain.

cared for, all towns having good churches and schools. Bowbells, the metropolis, has a new \$20,000 school building, two newspapers, two good banks, and eight grain elevators.

tion of buildings, installing of machinery, etc., will follow as rapidly as possible. This will occupy all summer and some time into the fall, but we expect to have the plant operating by October 1st.



The farm scene is the home of Mike Mertes, 3 miles southwest of Bowbells. The house cost \$2200, has furnace heat, hot water and cold in each room, and it would take \$40 an acre to buy him out. He came here 10 years ago with nothing, and has now a fine farm of 480 acres.

BRIQUETTING PLANT FOR NORTH DAKOTA

H. E. Soule, representing the National Briquetting Co. of Minneapolis, arrived in Kenmare this morning and advises the Journal that the first plant of this gigantic organization is to be located at Kenmare.

Asked as to what had been done regarding the deal and what we could expect, Mr. Soule said:

By the first of November we hope to have it making 500 tons of briquettes daily.—The Kenmare Journal.

INSTITUTES FOR MARCH

Calvin, March 14th and 15th.
Munich, March 16th.
Hampden, March 17th.
Edmore, March 18th.
Knox, March 22nd.
Willow City, March 23rd.
Westhope, March 24th.
Bottineau, March 25th. Arrangements not completed.
Lansford, March 28th. Arrangements not completed.
Sherwood, March 29th.
Mohall, March 30th.
Glenburn, March 31st.
Deering, April 1st.

CLASSIFIED ADS.

LIVE STOCK

HORSES

FOR SALE

Percheron, Belgian and Shire horses
J. W. & F. T. PETERSON, Litchfield, Minn.

MEADOWBROOK STOCK FARM. Clydesdales and Shetland Ponies, imported and home bred. Prices reasonable and terms to suit. Write or come and see me. **GEORGE LANG, Mapleton, Minn.**

CATTLE

North Branch Stock Farm. High class Short-horns. Herd, bull, Supreme Judge 177722—pure Scotch. **John Donnelly, Grafton, N. D.**

REGISTERED RED POLLED CATTLE
Young Stock of Both Sexes For Sale.
C. G. FAIT & SON, Monango, N. D.

FOR SALE: A fine purebred registered Holstein-Friesian bull one and one half year old, of the famous DeKol and Pietertje families, the best dairy breed in the world.

F. J. STEIDL,
Wheaton, Minn.

FOR SALE

GALLOWAY CATTLE
J. W. & F. T. PETERSON, Litchfield, Minn

SWINE

POLAND CHINA PIGS, also Shropshire sheep. Seed grain. **GEO. N. SMITH,**
Amenia, N. D.

EGGS AND POULTRY

EGGS FOR HATCHING. Express prepaid, \$2 per 15, from pure bred Golden Wyandottes and White Plymouth Rocks (Fishels strain.) Wyandotte stock for sale. Send for Catalog. **C. H. MCGEE, McHenry, N. D.**

MISCELLANEOUS

SEED FLAX, N. DAK. NO. 155

Raised on sod guaranteed free from foul seeds or wilt. For sale by

T. K. Tobiason, Kempton, N. D.

Envilla Stock Farm, Cogswell N. D. will quote you special prices on Angus Cattle, Shetland Ponies, Duroc Jersey Hogs, Wolf and Fox Hounds, Fancy Poultry, Pet Stock and Ferrets.

FAIRVIEW STOCK FARM. Breeder of Short Horn Cattle, Mammoth Bronze Turkeys and B. P. Rock Chickens. Young Stock for Sale.
F. R. HAMMOND, Prop., Bismarck, N. D.

FOR SALE Half section well improved farm 3 miles from town. Price \$6000. A snap
Lyon Land and Loan Co., Bowbells, N. D.

EGGS! EGGS!

White Plymouth Rocks 15, \$1.50
White Holland Turkeys 10, \$1.50
Pekin Ducks 10, \$1.00

Angus Cattle and Oxford Down Sheep stock always for sale.

WILLOBANK FARM

Eastgate Bros., Larimore, N. D.

J. W. Wampler

Bordulac, N. D.

EXPERIENCED AUCTIONEER

Live Stock and Farm Sales

Familiar with Pedigrees. Prices reasonable and satisfaction guaranteed. Correspondence solicited. References given.

North Dakota Farmers Favored by the Law of Supply and Demand

The Present Must Provide for Succeeding Generations

By J. H. Worst, President Agricultural College

North Dakota farmers are fortunate in possessing an exceedingly fertile soil. The crops that can be grown in our state also are absolutely staple. The demand for our cereals, wool, dairy, and meat products will increase rather than diminish and prices, except possibly for wool, will henceforth tend upward rather than downward. Moreover, the price of farm lands also will increase in proportion to the demands made upon them for food and raw material. This demand will grow with the growth of population which will increase approximately 3,000,000 annually. In fact, the per cent of increase has exceeded this estimate during all of our past history.

Importance of Agriculture

It should require no argument to convince any one of the important part that agriculture will play in the future of our country. The food for all our people and, in the main, the raw material for our factories must come out of the soil. The soil of an agricultural state, therefore, and the men who own and till the soil will be more important factors in the nation's prosperity than ever before. Naturally, the farms will be reduced in size and be more intensively cultivated. The demand for farm produce will make it worth while to double or treble the labor and capital applied to each acre of land, which will increase the yield accordingly. It also will bring less desirable grades of land under cultivation, which will help to swell the volume of agricultural wealth.

All this will occur in the near future. It will be difficult to forecast the annual total of wealth our state will produce under conditions here outlined.

Care of land

This one great natural agency so essential for meeting the demands of the immediate future for bread and meat and factory material should be conserved to the utmost. Moreover, every young man at all inclined toward the vocation of agriculture should lose no time in securing a farm—tho but a small farm. He should also study agriculture with even more energy than the attorney studies his law books, for it will net him larger returns.

The cities and towns are growing at a tremendous rate and all must be fed. The farmer thus occupies a position of *advantage* and independence and will *suffer least* of all from over crowding. His business and his profits will increase, for the demand for his products will o-

vercome the usual effects of vocational competition.

High Prices

The prices of farm products are high but they will become higher. A sensible reform in our American habit of extravagance may, for a period, steady prices, but the law of supply and demand cannot be abrogated. Population will continue to increase and sooner or later prices of farm products will climb again, governed by a law as unailing as the law of gravitation.

Millions may, in time, suffer on account of the increased cost of living, but the agricultural districts will be the last, under normal conditions, to feel the stress of poverty. Farmers live first before selling their surplus products to others.

Co-operation

By co-operation, however, and the elimination of purely speculative forces, consumers can be fed at more reasonable cost, notwithstanding the natural law

joy a high degree of prosperity by eliminating middlemen and seriously studying their business instead of studying too exclusively other kinds of literature. In those countries, the farmers control, farmers being in the majority. This should be true of every agricultural state. When the majority interest of any country delegates price-making and other economic affairs to a small minority, it must expect to be shorn closely and often. The time has fully come when farmers should be more than mere producers of wealth. For their own and for the good of the country, they should participate actively and harmoniously in distribution as well as production; in making as well as obeying laws; in providing the conditions under which they must operate.

North Dakota farmers enjoy a favorable outlook. With numerous and fertile acres, all easy of tillage, abundant harvests, transportation facilities unex-



What Sort of Soil Shall be Inherited by the Children?

governing the price of wheat and other farm products. The speculator's profits which, in the aggregate, are enormous, fall almost, if not entirely, upon the consumer. As the speculator's relation to producer and consumer is akin to the ordinary parasite, he may well be eliminated for the good of both.

Denmark and Holland have set the pace for effective co-operation among farmers and dairymen for all countries. They have done more. They have demonstrated that, even on small holdings, both farmers and the state may en-

celled and an unailing demand for their products, not one of which is perishable, what more could be desired? To take the best of care of this rich legacy and to study the business of farming unceasingly will prove to be worth while. Anything short of this will prove shortsighted and unpatriotic.

SOIL FERTILITY--WORTH THINKING ABOUT

The following circular letter sent out by Rockwell Sayre of Chicago is worth more than a passing thought.

Dear Sir:

Protection of Soil Fertility, Can be aided, and the life of the Nation prolonged, if Congress were to pass a law:

That no small grains shall be grown, any year, in any state, territory, or island of this Nation, upon any land that raised any kind of small grain the year before; nor any cultivated crop, upon any land that raised any kind of cultivated crop the year before, unless it be a nitrogen fixing crop. Nor shall any fertility be removed by cropping, in any year, that is not restored within that year, or the next year following. No product raised in violation to be carried interstate—as no beef raised with lumpy jaw can be carried interstate.

When we shall receive large crops, with fertility undiminished, then shall we be glad, and give thanks; but at present the larger the crop (and depletion of fertility) the more do honest men weep, and ask for reasonable protection. Treating land fairly pays the producer better, also the soil needs food and rest, just as a horse does, to get the most and best out of it. The rich bosom of mother earth, if we would but nourish it a little, could easily suckle us all. The soil yields more than all the gold, silver, or copper mines, more than the steel output, or lumber, or petroleum, more than all the factories of New England.

The strength of a Nation, is the

Through Short Line Service to Portland

Via

Spokane and the New "North Bank" Line



If you are going to the Coast—to Portland or California—the electric-lighted "Northern Pacific Express," daily between Chicago, Spokane, Portland and Puget Sound Cities will furnish through Standard and Tourist Sleeping Car accommodations to Portland and the Sound without change of cars. This is one of the five daily electric-lighted transcontinental trains operated by the

Northern Pacific Ry

A la carte dining car service---cuisine famously good

Full information about fares and service and reservations of space upon application by
By consulting your LOCAL AGENT

Yellowstone Park Season 1910, June 15-Sept. 15

Annual Rose Festival Portland, June 6-11

A Premium Worth Having

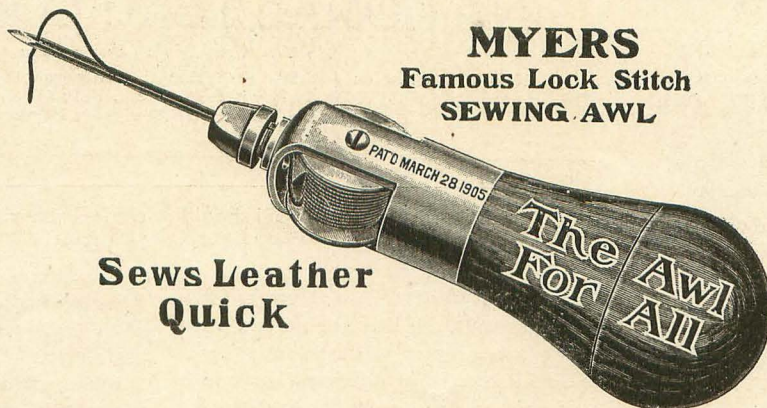
This awl is one of the handiest tools about the farm. Would you like one without cost? The Regular Price is \$1.00.

Do

It

Now

Sews Leather
Quick



Lest

You

Forget

There are four ways by which you may own one of these awls: First, Send your renewal and one new subscription with \$1.00. Second, Send two new subscriptions and \$1.00. Third, Send renewal for two years and \$1.00. Fourth, Send \$1.00 and we will renew your subscription and send the North Dakota Farmer for six months to any three persons in this state. The awl will be sent post paid.

Address,

NORTH DAKOTA FARMER, Lisbon, N. D.

strength of its soil, largely; therefore some such law will be approved by patriots, and those who understand plant food chemicals in soil, and those who know the impossibility of restraining men without law. It will soon be too late to pass it. Soil fertility is being destroyed rapidly everywhere,—Virginia land that sold for \$100 per acre, and was worth it, sells now at \$10 and is not worth it. And many York State farms have been abandoned.

Battleships can not save this Nation after we have foolishly destroyed the soil. The proud Eagle will be weak and torn by every hawk.

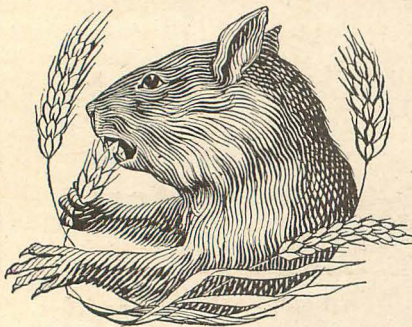
Education, without a protective law, will never save the soil, (men know better now, but keep on robbing it) neither will this law, save it, (alone), but some such foundation law is necessary, if it ever be saved at all. Spain saved her Cork Oak by a protective law, we lost our pine and red cedar without; game birds have been preserved by protective law—the buffalo were lost without. Irrigated land also, and dry farming too, all will become barren or shameful, without some such law.

Let the Nation act promptly, and secure food for its increasing population, animals, and birds; for without fertility of soil all must perish.

OAT SMUT

I would like information in regard to smut which appeared upon my oats last year. Was first noticed when the heads were forming or shooting. Each head affected was a total loss. At cutting time there was a black mass of smut,

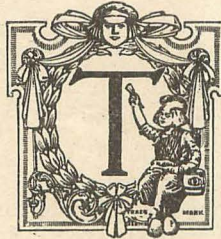
CHEAP INSURANCE



FOR GRAIN GROWERS

"Woodlark" Squirrel Poison is the most reliable and destructive agent yet devised for the extermination of Gophers, Squirrels, Sage-Rats and Prairie Dogs. It is the cheapest insurance against their ravages. Every kernel is warranted to kill. Climatic changes or moisture of the earth do not destroy its strength. Requires NO MIXING OR PREPARATION. Is always ready for use. No other is so good. Dealers will refund the purchase price if not as claimed. Pamphlet free. HOYT CHEMICAL CO., Portland, Oregon

Repaint Before Decay Begins



THE time to repaint is before the old coat has worn off. To delay is to invite damage by the weather. Then the money apparently saved by not painting may have to be spent for repairs. After that the painting has to be done in addition. This can hardly be called economy.

¶ But to keep buildings *always* well painted with good paint is *true* economy, for good paint both beautifies and protects.

¶ The only way to get quality in paint is to use pure white lead ("Dutch Boy Painter" trade mark) mixed with pure linseed oil. These two materials form a perfect union, and when applied have the quality of penetrating the surface covered and becoming part of it. They wear down uniformly and the surface is ready for repainting without scraping or any other preparation except brushing off the dust.

¶ Paint made of substitutes for pure white lead soon cracks, scales and drops off, allowing dampness to reach and rot the wood. Then the poor paint must be scraped off before a new coat of good paint is applied. This means unnecessary expense which may always be avoided by starting with paint made of our pure white lead ("Dutch Boy Painter" trade mark).

¶ We have prepared a number of interesting booklets on the subject of decorations and color schemes for the interior of the home, and the arrangement of shrubbery outside. This information will enable any one to have an attractive home, with pleasing surroundings. We call the booklets our "Dutch Boy Paint Adviser No 38" and will send them free to any reader of this paper.

Our Pure White Lead ("Dutch Boy Painter" trade mark) is now packed in steel kegs, dark gun-metal finish, instead of in oak kegs as heretofore.

NATIONAL LEAD COMPANY

An office in each of the following cities:

New York Boston Buffalo Cincinnati Chicago Cleveland St. Louis
(John T. Lewis & Bros. Co., Philadelphia)
(National Lead and Oil Company, Pittsburgh)

dry and dusty, where each kernel should be. About eight or ten per cent of the heads were smutty. In the grain, after threshing, it was hard to detect the presence of smut. I like these oats very much and do not want to lose them. Would like to know if it would be safe to seed such oats on new ground if the oats are first well treated to destroy the smut.

A. E. H. Mercer, N. D.
Answered by Prof. H. L. Bolley

In answer to your correspondent with reference to Oat Smut I may say that the formaldehyde treatment for the prevention of oat smut is thoroly efficient and not only destroys the smut but in-

creases the yield of oats when properly handled.

The seed is treated just before sowing. First grade the seed so as to blow out all of the light weight grain and then treat as follows:

Make up a solution of formaldehyde of a strength of sixteen ounces to forty-five gallons of water. If a regular smut machine is not available for the dipping processes the grain can be thrown into a tank of the solution and shoveled out with a perforated shovel, or it can be dipped in wire baskets or in coarse gun-aey sacks. In any case some arrangement should be made to allow the grain to drain for a time after removing from the solution, so that the solution which

runs off can run back into the tank, avoiding waste, or after the grain has been properly graded it can be thrown on a tight floor or canvas and sprinkled thoroly with the solution, the grain being shoveled over persistently while the spraying is being done. A bushel of dry oats will absorb from two to two and one-half gallons of the dry solution. The grain should be left piled in a pile for a couple or three hours and it does not do any harm to cover it up with a blanket so that the fumes will thoroly permeate inside of the chaff or scales. It will in this way reach the spores which are enclosed with the grain, the spores of the smut under the scales. The grain

should be shoveled over thoroly so as to get rid of the excessive moisture and then sown immediately to get the best advantage from the treatment. Do not wait for the grain to dry out because it does harm and is unnecessary.

If the grain is measured before treatment and then measured up after treatment the one doing the work will know exactly how much it is swollen and should then set his drill to sow seed accordingly.

Usually two bushels of oats will swell enough to make it necessary to set the drill to sow two and a half bushels in order to get two bushels of seed on the ground.

He said the farmer took better care of himself than any other class, adopting protective clothing, shoes and boots built on every day horse-sense. In view of the fact that 67 per cent of all ailments of men who work in the fields, etc., gain access to the human system via the feet, practically every farmer is a firm believer in perfect protection. That is why the American farmer is the biggest purchaser of double thickness rubber boots of such high grade as the famous "Ball Band."

Working in spring time in wet places and being compelled to go thru mud and water, only absolutely the toughest, durable first grade rubber composition should be the farmer's foot protection—and that fact is recognized by the greater majority.

That the farmer takes better care of himself than his city brethren is evidenced by Roosevelt's country life investigation. No better evidence can be secured than the fact that there are 8,000,000 wearers of "Ball Band," which is known to farmers by the little red ball trade mark on the top of the boot and on the heel.

Can Recommend It To Others

Your Gombault's Caustic Balsam is very effective in curing troubles peculiar to horses. It has proved valuable to me and I can recommend it to others.—N. I. NELSON, Dwight, Kans.

THE LOCKSTITCH AWL

Never since this paper was established have we been able to offer such a practical premium as the Meyers' Lock Stitch Awl. We are offering it absolutely free with a two years' subscription. It will be of service years after the fountain pen, buggy whip and similar "catchy" premiums are discarded. Its cost is many times that of a cheap whip or pen and its value—well, try it. See page 11.

240 Acres In Williams Co., N. Dak., for sale cheap. Rich soil, small buildings plenty of water.

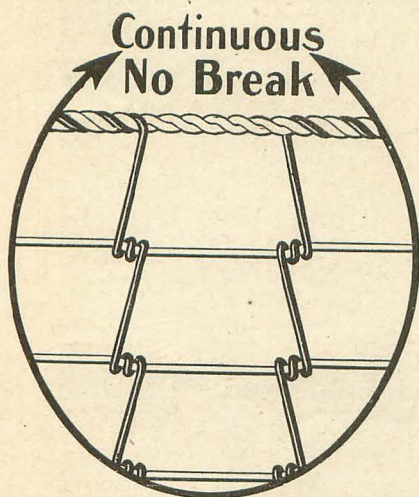
Write to C. W. BEARD, Indianola, Iowa

GRAND 5-YEAR OFFER, PAGE 20

AMONG OUR ADVERTISERS.

A TIP ON FENCE BUYING

So many of our readers are now in the market for fencing, that we want to give them a bit of sound advice. Buy a good fence—and you won't have to keep repairing it every month—you won't have to replace it in a year or two. Your business judgment ought to be your guide in buying a fence. If you figure it out, it doesn't pay to buy a cheap fence. For the first cost of such a fence is only "a drop in the bucket." You'll find yourself fixing that fence so often, you'll be sorry you didn't pay a few cents more in the first place for a good fence. The experience you have had with poor fences should prove to you that it pays to get a good fence—to buy a fence that will end your fence troubles for a number of years.



Just such a fence is Advance, made in Elgin, Ill., by the Advance Fence Company. Note the illustration above. It is made of solid wire. The stay wire is continuous, woven in with the main top and bottom wire, running the entire width of the fence from one stay to the next, so Advance fence is always rigid. Advance fence is made of open-hearth steel, galvanized with a heavy coat of 99-per-cent-pure spelter, rendering it as

nearly rust-proof as a fence can be. The price of Advance fence compares favorably with cheap fences, because it is sold direct from the company's factory in Elgin and all freight is prepaid to you wherever you live. Advance Fence is shipped on 30 days' free trial, so you know just what you are getting before you decide to accept. We suggest that you write a postal to the Advance Fence Co., Box 106, Elgin, Ill., for full information about their high quality fence and their low factory prices.

Flint's Condition Powders Makes an Old Horse Feel Like a Colt.

Hanover, Pa. Sept. 21, '09.

DR. B. J. KENDALL CO.,
Dear Sirs:—Enclosed find fifty cents for which please send me one package of your Renovating Powders. It is one of the best powders we have ever used, and makes an old horse feel like a colt.

Yours truly,
Howard C. Resh

HOW FARMERS SAVE DOCTOR BILLS

Warm Feet and Comfort the Keynote
to Perfect Health—Reason for
Little Sickness

Absence of human ills among American farmers, as strikingly told in the report of Ex-President Roosevelt's country life commission, has called forth the basic, homely facts in the case from a well-known Chicago physician.

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Of Steel**

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Roller Bearing
Makes draft 30 to 50% lighter.

Built the Modern Way
Steel Gears and Wheels trussed like a bridge. Automobile Hub. Oil Without Removing Wheels.

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It pays to know the Davenport Roller-Bearing Steel Wagon. Cheapest because it has double the life of the best wooden wagon. Write now for Catalog R, to
DAVENPORT WAGON CO.
Davenport, Iowa.

North Dakota Farmer

AND SANITARY HOME

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Lisbon, North Dakota.

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PROF. C. B. WALDRON, Fruits, Forestry, and
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PROF. O. W. DYNES, Poultry

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Vol. 11 MARCH, 1910. No. 9

GOOD AND BAD PAINT

A correspondent writes as follows:

"Gentlemen. I am receiving two copies of the North Dakota Farmer; one is more than I care for; therefore, consider this a notice to discontinue both copies of the same.

"I buy my paint from a Chicago mail-order house and find it very much superior to the brands you are plugging for."

Kermit, N. D. H. D. M.

Answer

It makes no difference to the writer or to the editor of this paper what paint is purchased by any party in the state. The only stand that has been taken is that each and every paint shall be labeled to truthfully show of what it is composed, and let the public decide for themselves which paint they prefer.

Experiments have been repeatedly made to test the wearing quality of the various paints, and for the benefit of our correspondent and other readers of the North Dakota Farmer, I am reproducing here a cut showing the wearing qualities of one of these catalog house paints. Paints of good quality, which were applied under the same conditions and at the same time, are still wearing well. Inside of two years after this paint was applied practically all of the catalog-house paint had peeled or fallen off from the test fence.

The North Dakota Farmer has not advocated any manufacturers' paint, but we have stated our views with regard to the qualities of paint; and we believe that the majority of people in North Dakota prefer to know what they are buying, whether the product is pure,

whether it is full weight, and whether it is as represented in every respect.

I am renewing my subscription to the North Dakota Farmer. I will say that it is with great pleasure I do so, as I consider it one of the best farm papers that come to me. I start on page one and never stop until I have read it all thru. Altho I can't live up to or put in practice all the good advice that I find in its pages, I try to practice some.

I remember when I first came to the state how the opposers of the Pure Food laws were threatening to put Prof. Ladd out of business, but he is still alive and active, and I can't but see the great difference there is in the food stuff on the market.

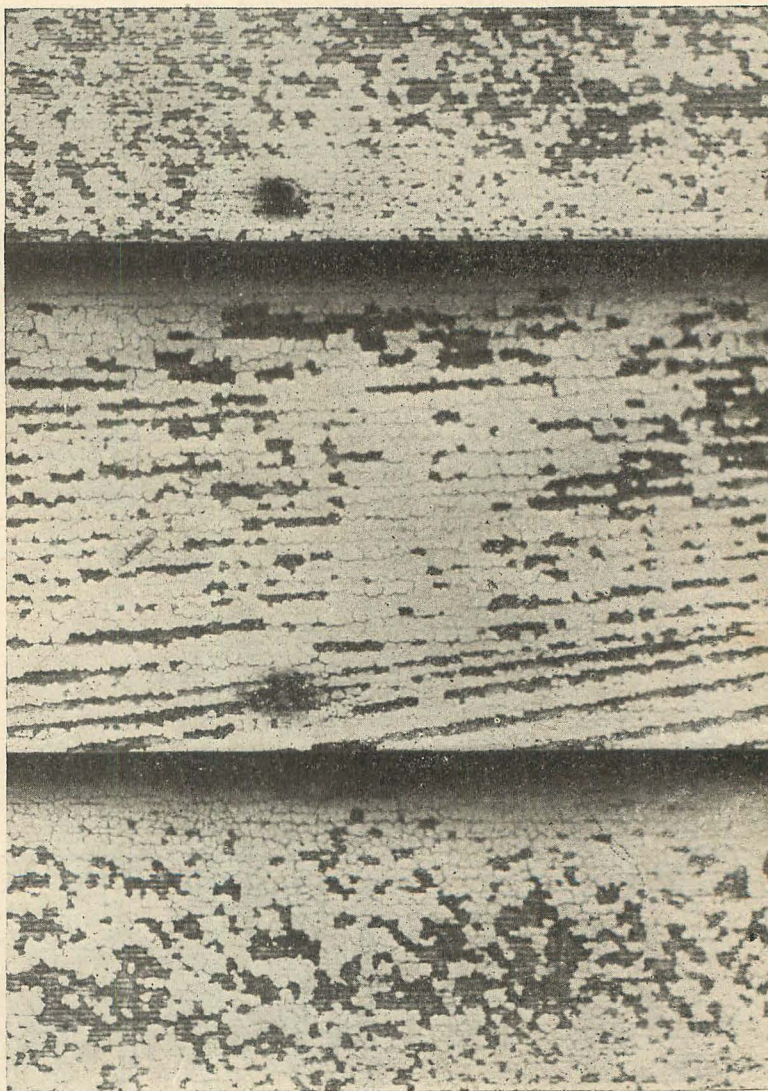
I am with you at heart in the work that you have done so well. I wish you a prosperous year. I am very truly
M. A. McDonald Edmore, N. D.

Had we not received the rather harsh criticism from the reader at Kermit, N. D., the above letter, which, by the

way, was accompanied by a renewal for five years, would not have appeared, as we do not feel justified in devoting much space to the publication of letters of commendation, however much we may appreciate kind words.

While we may at times be deceived, our policy has been, is, and will be, to advocate only those measures and advertise only those products which we believe to be for the best welfare of our readers. Such a policy has cost far more than our readers imagine and it is possible to maintain this policy only thru such hearty and substantial co-operation as Mr. McDonald and thousands of other North Dakotans have given. As the very life of this publication depends almost entirely upon the advertising patronage it receives, we take this opportunity of urging our subscribers, especially the many hundreds who have recently joined us, to mention the NORTH Dakota Farmer when answering advertisements.

Manager.



Catalog house Paint. Bad wearing quality of paint clearly shown. (From Paint Bulletin No. 1, North Dakota Experiment Station.)

Pure Food Advertisers

The products advertised below are in compliance with the pure food law of North Dakota and of the highest grade.
ASK YOUR GROCER FOR THEM.

"BUY"

"EAT"

HOME

BRAND

Pure Food Products

"ECONOMY"

"SATISFACTION"

Griggs, Cooper & Co.

MANUFACTURING
WHOLESALE
GROCERS,

ST. PAUL, MINN.

Main Offices:
CORNER THIRD AND BROADWAY

DR. PRICE'S
JELLY

DESSERT
NUTRITIOUS-WHOLESOME

One package, 10 cents, makes one pint of wholesome Fruit Jelly. All flavors from true fruits.

BE SURE TO ASK FOR

HIAWATHA or NOKOMIS

Brands

PURE FOOD PRODUCTS

Fruits, Vegetables, Spices, Extracts, Coffees, Teas,
Cereals, Sauces, Catsups, Syrup, Molasses, Starches,
Saleratus, Etc., Etc. These goods are the

BEST THAT SKILL AND MONEY CAN PRODUCE

Stone-Ordean-Wells Co.,

WHOLESALE GROCERS.

Manufacturers and Importers

DULUTH, MINN.

BRANCHES at Minot, N. D., Billings, Mont., Bozeman, Mont.,
Butte, Mont., Hancock, Mich., Bismarck, N. D.

MONARCH BRAND



FOOD PRODUCTS

A GUARANTY OF PURITY. A WELCOME GUEST at every table where the HOUSEWIFE demands the BEST. THE MONARCH LABEL insures QUALITY in Coffee, Catsup, Pickles, Maple Syrup, Canned Goods or any article bearing the MONARCH BRAND of REID MURDOCH & CO., CHICAGO.

YERXA

FARGO, N. D.

"The Cash Grocer"

We buy in large quantities, for cash only, for our various stores and can save you money.

Big Store

Big Stock

Big Sales

Small Profits

Cash

"GRANT'S

Candies are

PURE."

HONEY

Well ripened clover Honey for Sale, guaranteed absolutely pure and of the finest quality. One 30-lb. can 11 1/2¢ per lb.; 2 or more cans 11¢; 12-lb. cans, in full cases of 72 lbs., 11 1/2¢ per lb. Send for price list. Address

M. V. FACEY, Preston, Fillmore Co., Minn

Livestock Department

PROF. W. B. RICHARDS, Editor

FARM AND STOCK NOTES

N. J. Shepherd

Hereditary excellence is what gives one breed superiority over another.

Constant watchfulness and attention to breeding up are necessary to effect appreciable improvement in the livestock.

Breeding from immature stock has a tendency to degenerate the offspring and gradually deteriorate their vitality, size, growth, bringing disappointment.

The same time and nearly the same amount of labor is expended in the low grade that there is in the higher grades.

Dryness is one of the requirements in the production of the finest grades of wool and exposure to dampness makes the wool hard and brittle and the fiber weak.

done better than if you try to assist with some stimulant or other.

The highest physical condition is essential to the most rapid growth, and whenever an animal's condition is allowed to get below this point there must be a check in its growth, a weakening of its vitality and a general stunting of its development.

THE COST OF BEEF

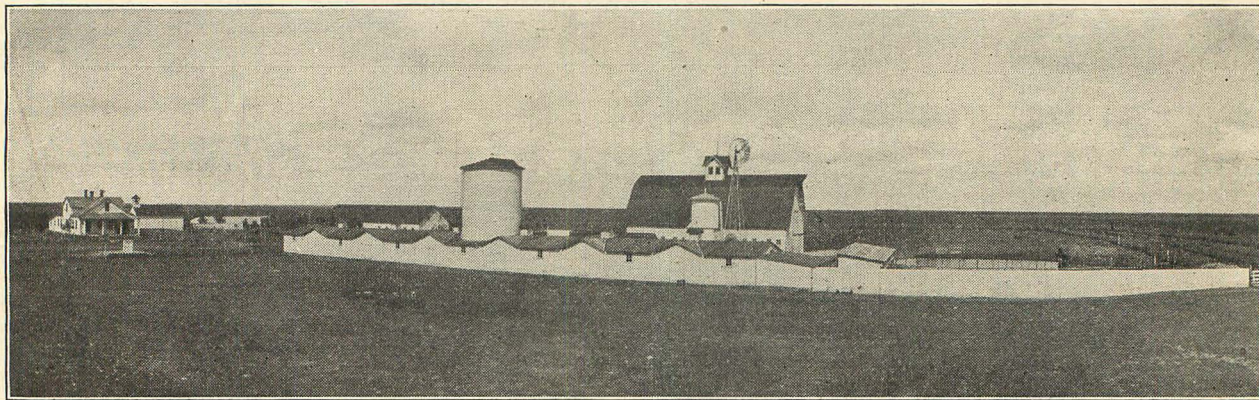
Who Makes the Profit?

Of late a great deal has been said with regard to the cost of food products, and we have seen against the high prices of meats boycotts prevailing in many parts of the country, probably not as successful as they could have been, but of detriment to the farmer, because the Beef Trust were able to purchase animals at a lower price, slaughter them and place

working life in earning the farm on which the steer is to be raised. He must then cultivate that land; he must raise crops of hay and corn and other produce to feed that steer. He must then for four long years dance attendance upon the wants and the requirements of that animal. He must feed him and shelter him and take care of him, with a three-time fork at one end and a four-time fork at the other end. At the expiration of that time he ships him to Chicago, pays the freight and feed and stockyard charges and turns him over to the beef trust.

"That represents the amount of labor expended upon that steer by the farmer. What then becomes of him? Mr. President, within thirty minutes after he goes into the hands of the beef trust he is beef and in cold storage and ready for shipment to the city of Washington or to other places.

"Now, what are the comparative prices that are received by the farmer and that are received here? I have before me a bill of fare taken from the United States senate cafe down here. I look at that bill of fare and I



Livestock Farm of J. A. Englund, Kenmare, N. D.

No matter what the age, it is rarely a good plan to sell a brood sow as long as she produces good, strong litters. But if a sow does not prove a good breeder with her second litter the sooner she is fattened and marketed the better.

It is the rapid growth that pays the best. It is in the weight that is put on when the animal is fed beyond the food of support, that is the profitable weight; the best profit comes when the animal is doing its best.

It costs no more to raise a colt to the age of three years than to raise a steer to the same age. The colt, if a good one—and it is poor economy to fool time with any other—will bring double the money that a steer will.

Shedding of the hair in the spring is one of the provisions of nature, and if the matter is left to nature alone, it will be

the same in cold storage, where it is said there are animals of one kind or another to supply one whole animal to each individual in the United States. It is also reported that some of this meat is kept in cold storage for at least two years.

But speaking of the cost of meat at the present time, Senator McCumber of North Dakota, before the Senate, has the following to say:

Primary Beef Costs

"You are complaining about prices paid for beef? Do you ever stop to think what it costs to produce that beef—of the years of labor bestowed upon it?

"It takes about four years to produce a steer in the best condition for beef purposes. Before the farmer could own that steer he must expend from one-half to two-thirds of his

observe the prices of steaks. I notice that the ordinary sirloin steak will run from \$1.15 up to \$3 per service. I notice that the tenderloin will run about the same; and I find that the porterhouse will run from \$2 up to about \$4 in the ordinary restaurant.

A \$2,000 Steer

"I had a meat man a short time ago give me an estimate of what a 4-year-old steer would bring if served at one of the restaurants here in the city of Washington at these rates, taking all the items that you will find in this list, and he estimated that it would bring from \$2,000 to \$3,000. The farmer's price is about \$60 to \$80, with all of the four years that he expended upon that steer. With the little additional work, thirty minutes in the city of Chicago and transport-

ing him here to the city of Washnig-ton and cooking him at your cafe, he advances from \$70 to \$2,500 or \$3,000—enough to pay half the price of a farm. Yet the people who are paying those prices for this same steer served are introducing bills in congress and asking that the tariff or protection be taken away from the farmer's product on which he has expended all these years of labor.

"Now, let me speak of this matter as it applies to other products and I will show that the farmer's produce immediately advances with a very little additional labor upon it from 200 per cent to 6,000 per cent before it reaches the table of the family or in the restaurant.

DAIRYMEN MEET, STATE CONVENTION, JAMESTOWN, FEB. 24 AND 25

North Dakota Dairymen assembled at Jamestown for their sixteenth annual convention on the 24th and 25th. It was an enthusiastic gathering, as it was made up largely of men who had made a struggle against odds to make a success of the dairy business and had succeeded beyond their expectations, and their success is prophetic of what is to come for this state.

Another convention had been held at Grand Forks two days previous, the Corn and Clover Convention, which was incomplete in itself, as it takes the dairymen to make the proper use of the corn and clover, and with the corn and clover and cows a permanent agriculture of the highest type is assured, and it is giving

ST. PAUL UNION STOCKYARDS COMPANY

ST. PAUL UNION STOCKYARDS REPORT FOR FEBRUARY

	Receipts					
Railroads	Cattle	Calves	Hogs	Sheep	Horses	Total Cars
C. R. I. & P....	446	39	900	21	18	31
C. G. W.....	662	67	3660	664	78	86
C. M. & St. P.	1806	314	10021	2618	224	243
M. & St. L.....	963	212	8261	561	.....	153
C.St. P. M. & O...	1879	189	14981	1958	139	298
C. B. & Q.....	321	13	1420	426	39	37
M.St.P. & S.S.M.	1999	925	4164	1392	7	145
Gt. Nor.....	3256	1537	11963	7942	35	340
Nor. Pac.....	1618	338	1812	3845	2	108
St. P. B. & T..	.....	.....	.....	.....	.....	.....
Driven In.....	734	18	580	1153	01	.....
Total.....	13684	3652	57762	20580	552	1441
Increase.....	.....	608	.....	.....	365	.....
Decrease.....	4329	.....	7569	14212	.....	186
Average Wts.	862	146	217	95	.....	.....

Shipments

C. R. I & P....	333	1		103		58
C. G. W.....	1189	41	3651	3849		102
C. M. & St. P.	956	101	82	479	3	39
M. & St. L.....	353	3				14
C. St. P. M. & O.	1522	66			4	50
C. B. & Q.....	1372	1	10829	5135	34	168
M. St. P. & S. S. M.	152	3	71	2051	29	21
Gt. Nor.....	274	34			113	14
Nor. Pac.....	260	80	106	132	218	27
St. P. B. & T..						
Driven Out....	586	203	105	220	77	
Total.....	6997	533	14844	11969	478	446
Increase.....					277	
Decrease.....	4978	509	1241	15594		205

Origin of Livestock Received

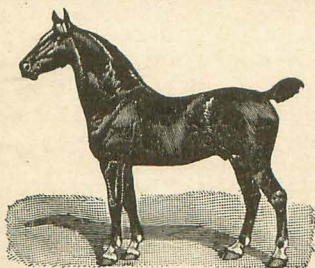
States	Cattle	Calves	Hogs	Sheep	Horses	Total Cars
Minnesota.....	10416	3201	47842	12641	213	1113
Wisconsin.....	1360	375	3971	850	137	123
Iowa.....	73		136		170	15
Far South.....	27				25	3
So. Dakota....	385	16	3354	498	7	64
No. Dakota....	987	59	2459	2345		87
Montana.....	267	1		4246		31
Far West.....						
Manitoba&NWT						
Far West.....						
Returned.....	169					5
Totals 1910....	13684	3652	57762	20580	552	1441
Totals 1909....	18013	3044	65331	34792	187	1627

Disposition of Livestock

So. St. Paul Pkrs...	6377	3150	42987	14481		
City & State Butch	974	226	211	132		34
Outside Packers	210		14633	816		140
Minnesota.....	1392	230		316	152	40
Wisconsin.....	331	7		186	5	15
Iowa.....	1061					35
Nebraska.....	239					7
Kans. & Missouri	76					2
So. Dakota....	232					6
No. Dakota....	84	7			257	16
Montana & West					20	1
Far South.....						
Manitoba&NWT						
Mich. & E. Can.					10	2
Chicago.....	1177	3		10416	16	105
Ills (ex Chicago)	779	20		103		28
Eastern Points	273				18	10
Returned.....	169					5
Totals 1910....	6997	533	14844	11969	478	446
Totals 1909....	11975	1042	16085	27563	201	651

Warranted to Give Satisfaction.

Gombault's Caustic Balsam



Has Imitators But No Competitors.

A Safe, Speedy and Positive Cure for

Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Cleveland, O.

the farmer confidence in his business, as dairying brings in its monthly check in spite of drouth and hail, while weeds and decreasing fertility have no terrors for the dairymen.

The principal problems they are dealing with now are the getting of good cows and the weeding out of the poor ones, learning what to feed to the cow and obtaining good butter makers.

Butter makers were discussed by Joel Winkjer of the Department of Agriculture of Minnesota, who contended that the Dairy Association and Agricultural Colleges ought to cooperate in trying to provide better training for dairymen and also that there should be more organization, as that has been the secret of all great enterprises.

E. K. Slater of Minnesota also contended for better education and emphasized the need of the butter maker's cooperating with his patrons, studying their conditions and being accommodating, as business was largely based on friendship.

Mr. O. A. Storvick, Dairy Inspector of Minnesota, related instances of how a butter maker, by taking the proper interest in his business, not only inside the factory but also in the patrons, had been able to build up a great business. In fact they all were emphatic on this point, that the butter maker should have a better training, that a good one deserves high wages, while a poor one was dear at any price.

The silo was discussed by Mr. Gregg, who had been in charge of Minnesota Farmers' Institutes for more than twenty years. He said he had used it for a number of years on his farm and had found it indispensable for dairying, and he even used it with good results for steers and sheep. He emphasized the need of placing it on a cement foundation so that rats could not come in to admit air in the silage and spoil it. He went into considerable detail in telling of the filling of the silo.

Gov. Burke addressed the evening session and chose as his topic, "Conservation." He classed dairying as the highest type of conservation work for North Dakota, as it builds up the fertility of the soil, one of North Dakota's greatest resources, and it is also a profitable line of business.

"Agricultural Art" was the subject of Supt. Hoverstad's address. He spoke on the cultural value of the different farm operations and of the opportunity it afforded for development. He also stated that the development of a fine farmstead, the feeding of fine animals and the other operations on the farm require art of no small degree.

"The Building Up of a Dairy Herd" was the subject of Col. R. A. Wilkinson's address. His plan is to start with the native cows, select those that have a

Other Cream Separators

Merely Discarded or Abandoned

De Laval Inventions

It is interesting and instructive to know that nearly, if not quite, every cream separator that has ever been made, and certainly all that are being made at this time, are merely copies or imitations of some type of construction originally invented or developed by the De Laval Company, and either not used by it because of something more practical or else discarded and abandoned in the course of De Laval progress and utilization of later improvements.

As earlier patents have expired some of their features have one after another been taken up by different imitators, so that at all times, as is the case to-day, every separator made in the United States or elsewhere in the world, utilizes some type of construction originally owned and developed by the De Laval Company, though some of them have never been commercially used by the De Laval Company because of their inferiority to other types of construction used by it.

The De Laval Company has always been forging ahead, with its many years of experience and the best of experts and mechanics the whole world affords in its employ, so that before any expiring patent might permit the use of any feature of construction by imitators the De Laval Company had already gone so much beyond that type of construction that it was then old and out-of-date in the modern De Laval machines.

All cream separator inventions by others have been of immaterial details or variations, upon which patents have been taken, if at all, more for the sake of the name than by reason of any real value or usefulness attaching to them.

The first practical continuous flow centrifugal Cream Separator was the invention of Dr. Gustaf de Laval in 1878, the American patent application being filed July 31, 1879, and issuing as Letters Patent No. 247,804 October 4, 1881.

This was the original Cream Separator—of the "Hollow" or empty bowl type—and it has been followed from year to year by the various steps of cream separator improvement and development, all De Laval made or owned inventions, the American patent applications being filed and letters patent issued as follows:

The original hand Cream Separator of the "Bevel Gear" type; application filed October 2, 1886, issuing as Letters Patent No. 356,990 February 1, 1887.

The original hand Cream Separator of the "Spur Gear" type; application filed January 17, 1887, issuing as Letters Patent No. 368,328 August 16, 1887.

The original Steam Turbine-driven Cream Separator; application filed December 8, 1886, issuing as Letters Patent No. 379,690 March 20, 1888.

The original "Tubular" shaped "hollow" bowl Cream Separator, application filed April 19, 1886, issuing as Letters Patent No. 372,788 November 8, 1887.

The original "Disc" bowl Cream Separator; application filed May 12, 1890, issuing as Letters Patent No. 432,719 July 22, 1890.

The original vertical curved or interlocking "Blade" Cream Separator bowl, covered likewise by the application filed May 12, 1890, issuing as Letters Patent No. 432,719 July 22, 1890.

The original "Bottom Feed" Cream Separator bowl; application filed July 24, 1889, issuing as Letters Patent No. 445,066 January 20, 1891.

The original "Suspended" bowl Cream Separator; application filed August 21, 1893, issuing as Letters Patent No. 512,203 January 2, 1894.

The original "Star" or "Pineapple Cone" shaped series of cylinders Cream Separator bowl; application filed August 24, 1893, issuing as Letters Patent No. 521,722 June 19, 1894.

The original "Curved Disc" Cream Separator bowl; application filed January 18, 1905, issuing as Letters Patent No. 892,999 July 14, 1908.

The original "Split-Wing" Tubular Shaft Cream Separator bowl; application filed April 29, 1898, issuing as Letters Patent No. 640,358 January 2, 1900—which invention, with a series of later improvements, is the type of bowl construction used in the De Laval machines of today, and still covered by protecting patents which prevent its appropriation by would-be competitors.

The patents thus enumerated are but a few of the more important of the more than 500 original Cream Separator patents owned, controlled and developed by the De Laval Company during its thirty years of creation and development of the Cream Separator industry throughout the world. They are recited because they show in the most illustrative and conclusive manner possible De Laval originality and leadership from 1878 to the present day.

In addition to these patent-protected features, the De Laval machines have within two years been mechanically re-designed and re-constructed in every part, from top to bottom, so that the new and improved line of De Laval machines are to-day, even more than at any past period, fully ten years in advance of any other cream separator made.

These are the Rock-of-Gibraltar-like separator facts against which the mere "word-claims" of would-be competitors fade away like the mists of night before the rays of the morning sun.

THE DE LAVAL SEPARATOR CO.

42 E. MADISON STREET
CHICAGO
1213 & 1215 FILBERT ST.
PHILADELPHIA
DRUM & SACRAMENTO STS.
SAN FRANCISCO

General Offices:
165 167 BROADWAY,
NEW YORK

173-177 WILLIAM STREET
MONTREAL
14 & 16 PRINCESS STREET
WINNIPEG
107 FIRST STREET
PORTLAND, OREG.

capacity for producing milk and cross them with a sire from one of the dairy breeds, and to keep on choosing the sires from the same breeds. He warned against using a grade as it has not the same power for transmitting its qualities. He spoke of the success they had had in Wisconsin in building up great dairy herds in this way and that they are now selling large numbers of dairy cattle from that section, and cattle that have been produced in this way. He also called attention to the grade of feed produced in North Dakota and that as a result an equally high grade of stock could be raised and developed here.

"Creamery Accounting" was the subject of a paper read by Ivar Lovaas of Driscoll. He very ably presented the needs for accounts and outlined a system that was simple yet comprehensive.

"The Improvements in Farming" was considered by Mr. Gregg, who brought out the many changes that have been made in dairying as the result of improved machinery, and that this was particularly significant to the North Dakota farmer as labor is scarcer here than farther East.

The scores in the butter contest were read by Commissioner Gilbreath, J. M. Hein of New Salem, who had the highest score of 93½, was awarded a fine silver cup. The other scores above 90 were M. J. Johnson of Kenmare, 93¾, while Hugo Dorn of Streeter had a score of 93. In the dairy butter contest, Mrs. E. J. Husfloen of Harwood scored 91½, while C. M. Christopherson of Ypsilanti and Frank Pendry, Jamestown, tied for second place with a score of 91 each.

The following officers were elected: President, Theo. Kahellek, Kenmare; Vice President, L. B. Bassett, Marion; Secretary, R. F. Flint, Bismarck; Treasurer, A. Gabrielson, Fargo; Directors, A. W. Gunningham, Larimore; J. C. Christenson, New Salem, A. W. Lawrence, Hebron.

Special Announcement

Arrangements have been made with Professor J. C. McDowell, Assistant

KENDALL'S SPAVIN CURE

NEVER KNOWN TO FAIL
Nooseneck Hill, R. 1, May 4th, 1909.
Gentlemen: I keep a number of horses and have used your Spavin Cure for the last eight years. I have never known it to fail in whatever way used. T. W. Babcock.

For Spavin, Ringbone, Curb, Splint, Sprains, Swollen Joints, All Lameness
—Proved by 40 years of use by hundreds of thousands, the best that the medical world affords. The standby for family use also. \$1 a bottle, 6 for \$5. Buy at drug stores and get free book, "A Treatise on the Horse," or write to—

DR. B. J. KENDALL CO.
Enosburg Falls,
Vt.

CENTRE--LANE STOCK FARM

BREEDER OF: Black Percheron and Hambletonian Horses, Red Polled Cattle, Poland China Hogs, White P. R. Chickens, White Holland Turkeys, White Embden Geese, White Pekin Ducks and White Guinea Fowls.

GROWER OF: Minnesota No. 169, Spring Wheat, Swedish Select Oats, White Hulless and Success Beardless Barley, Turkey Red Winter Wheat, N. D. 959 Winter Rye, Northwestern Dent Corn, Early Ohio Potatoes, Timothy and Alfalfa.

Young Stock and Pure Seed, for sale. Write me for particulars.

J. A. ENGLUND, Prop.

Kenmare, North Dakota.

THE ENVILLA STOCK FARM

COGSWELL, NORTH DAKOTA

SHETLAND PONIES. All colors, ages and sizes.

REGISTERED ANGUS CATTLE. Most popular families.

HEAVY DRAFT STALLIONS AND MARES. TWO SPANISH JACKS.

WOLF AND FOX HOUNDS that will catch and kill.

PET STOCK OF ALL KINDS.

PURE BRED POULTRY.

We can please you both in Quality and Price

L. H. WHITE, Prop.

COGSWELL, N. D.

LISBON TANNERY

Hides, Furs and Robes

We tan Horse and Cattle Hides. Skins of all fur animals for Robes and Coats. Oak Harness and Lace Leather. Robes are our specialty. No Complaints. Skilled Labor. Twenty-five years' experience. All work guaranteed. Pay highest market price for Hides and Skins. We keep a line of Harness Leather and Robes for sale. We pay the freight on Green Hides for Robes and Leather. Send for price list and shipping tags.

Lisbon, N. D.

OTTO JENSON, Proprietor.

Edgewood Farm

Breeders of Jersey Cattle; Poland-China Hogs; Mammoth Bronze Turkeys.

Some choice bull calves for sale; 100 turkeys to select from, from prize winning stock.

EDGEWOOD FARM, R. 2,

Fargo, N. D.

Agriculturist of the United States Department of Agriculture, and formerly connected with the North Dakota Agricultural College and Experiment Station, for a series of articles on "Farm Management." Prof. McDowell's acquaintance with North Dakota conditions makes him particularly well fitted to write on this subject, and his position in connection with the Department of Agriculture, qualifies him to speak with a degree of knowledge which will be helpful to our North Dakota readers. We hope to have an article for each issue during the present year.

NORTH DAKOTA CORN FED HOGS BRING PROFITS

Thomas F. Mooney of Logan township, North Dakota, one of the most enterprising farmers in the state, has just returned from Duluth, Minn., where he shipped a carload of hogs

that brought him \$1,738.50. Mr. Mooney has another such a carload of hogs on his farm, which he is fattening for the market in March.

Mr. Mooney is one of the North Dakota farmers who believe that corn raising can be conducted successfully here just as well as any place else, and acting upon that theory he planted seventy-five acres last summer. He was likewise the first man to operate a corn shredder in the state. Last fall Mooney bought 150 shoats, which cost him considerably less than \$1,000, and he fed these shoats on the corn he had raised on his seventy-five North Dakota acres. The result is not hard to figure out. Mr. Mooney will clear something like \$3,000 on his 150 North Dakota corn-fed hogs.

The carload that Mr. Mooney just sold at Duluth weighed 19,000 pounds, for which he received \$9.15 per hundred.

Poultry Department

Prof. O. W. Dynes, Agricultural College

POULTRY NOTES

The annual show the North Dakota State Poultry Association held Jan. 21-25 was a success beyond even the expectations of its most enthusiastic supporters. Judging from the gate receipts the attendance was at least twenty-five per cent greater than last year which had been the most successful in the history of the show. The number of birds entered was 625 and the high quality of the exhibits was a matter of general comment. Every well known breed was well represented and competition was strong, many breeders from other states having exhibits.

T. F. Roberts of Fort Atkinson, Wis. placed the awards and gave splendid satisfaction. The Barred Rock exhibit was as usual the largest and great interest was centered on this variety owing to the fact that Peterson Bros. of Harwood who had taken the bulk of the prizes in previous years had not entered for competition. Reed of Amenia and Cooper of Casselton were among the most prominent of the Barred Rock breeders. The exhibit of the Hausman Bros. of Hillsboro is well worthy of mention. They carried off the bulk of the winnings in White Wyandottes and White Leghorns.

Much of the credit for the success of the show is due to the efforts and enthusiasm of President Crabbe and Secretary Caniff. The exhibition has clearly shown that North Dakota is not a wit behind other states in the development of the poultry industry within its borders.

Casselton, N. Dak. is proving itself to be the Mecca of the poultry breeding industry within the state. A large number of enthusiastic poultry breeders who live in the town or adjacent to it have recently organized a society which so far as I know is unique in the annals of poultrydom. It is known as the Casselton Poultry Association and aside from the usual yearly poultry show the object of the association is to combine for mutual advantage. Inquiries and orders for birds and eggs go thru the hands of its appointive secretary and in turn is directed to the breeder or breeders of that particular variety. A small per cent of the sales is charged up to each breeder for the running expenses of the organization. A power bone-mill has been installed in one of the butcher shops and green cut bone can be procured at the wish of the members. Over

twenty varieties of fowls are kept in and around Casselton, doubtless a record that no other similar community in the state can claim. The benefits to be derived from such an organization can not be estimated.

SUCCESS OR FAILURE

Mrs. B. F. Wilcoxon, Hillsdale, Wyo.

It seems to me that we cannot over estimate the importance of keeping records of our hens, for upon these records depends the success or failure of our business. Under present conditions with the increased cost of everything which enters into the production of a dozen eggs, comes the necessity for the application of stricter methods of economy and a close attention to every detail.

We must get out of the old ruts and open an account with the hens, giving them credit for what they produce and charging them with what they consume. "But," some one says, "that is too much work, we cannot afford to spend time to keep these accounts. I dare

say most of you will find some surprises awaiting you when you begin keeping account of your flock. The hen owner who has by use of the trap-nest determined the egg producing ability of his hens has taken the first great step in discovering the difference between a profitable and an unprofitable hen. The question often arises, "What is a profitable hen." The only direct answer must of necessity be a general one. A profitable hen may be defined as one that will produce enough to pay for feed, care, interest on the necessary investments and some profit besides. The cost of keeping a hen will vary according to locality and cost of feed and labor. It is best to start with home constructed sheds as every bit of expense weighs upon the amateur sadly. In a great many localities the laying hen is receiving her share of attention. For a great many years in the past she has been a side issue, very few farmers have realized the real importance of the laying hen and the prominent position that she is filling in the agricultural affairs of the United States.

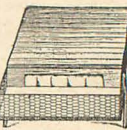
With land rapidly increasing in value the farmer is now beginning to wonder how he can make the greatest amount of profit and interest on the amount he has invested in his farm. By this I do not advocate the farmer's turning his entire



125 Egg Incubator and Brooder

Why pay more than our price? If ordered together we send both machines for \$10.00, — freight paid east of Rockies. Hot water, double walls, dead-air space between, double glass doors, copper tanks and boilers, self-regulating. Nursery underneath the egg tray. Both Incubator and Brooder shipped complete, with thermometers, lamps, egg testers—all ready to use when you receive them. All machines guaranteed. Incubators are finished in natural colors showing the high grade lumber used—no paint to cover inferior material. If you will compare our machines with others offered at anywhere near our price, we will feel sure of your order. Don't buy until you do this—you'll save money. It pays to investigate the "Wisconsin" before you buy. Send for the free catalog today, or send in your order and save time.

WISCONSIN INCUBATOR CO., Box 67, Racine, Wis.



\$10

1910 OFFER

For several years we have been searching for a magazine of national reputation with which we might combine, and in which we might have implicit faith as to its editorial policy and advertising patronage. The Farm Journal, of Philadelphia, Pa., is just such a publication. Its circulation is over 600,000; its class of advertising is beyond criticism. As a general farm paper, it has no superior in the nation. No farmer in North Dakota can afford to disregard our special offer of five years subscription to both the North Dakota Farmer and the Farm Journal, for only \$2.00. Subscribe yourself then pass the word along to your neighbor.

NORTH DAKOTA FARMER FIVE YEARS
FARM JOURNAL FIVE YEARS
BOTH FOR \$2.00

Why Bother to Renew Every Year?

Free Samples on Request. North Dakota Farmer, Lisbon, N. D.

attention to poultry, but rather a hint to the farmers' wives and especially the daughters who think that they have to go away from home to find something profitable to do in order to earn more spending money. Let me say to you that you can more than earn spending money at home, and with chickens too, with 300 hens the profits from which would assure you a larger income than the factory hand and not so many hours work per day, mostly in the open air and you would be in no danger of "losing your job." Facts have proven that there are hens capable of producing from 200 to 250 eggs per year. The laying hen is a wonderfully constructed creature capable of consuming raw material and working it over into a delicate food for man. The hen yields the family income in many cases. Rain or shine, snow or cold she is ever a faithful producer if properly cared for. The laying of eggs is her natural function. The poultry raiser who studies the factors which influence the production of eggs, is on the road to successful poultry raising. Improvement has been brought about thru careful selection, proper care and feeding and providing proper houses for the flock.

Good, pure bred stock is one of the factors for most rapid improvement. Too often the farmers do not give enough thought to the breeding side and even the matter of production receives but little attention. On undertaking any enterprise in whatever line it is extremely necessary to consider if what we are doing is to result in success. If starting out on a journey we would naturally determine the route to take and count the cost. To my mind it is more requisite to be thoroly decided what breed is to suit the requirements necessary to success in founding a laying flock. I would strongly urge the necessity of choosing at the outset one of the best laying breeds and stick to it. I have very often seen people start out fully determined to get up a good paying flock but before they were established on a paying basis some of their neighbors had a different breed of chickens and stated that they had done better than No. 1. So No. 1 becomes dissatisfied with his flock and tries a different one; after giving that one a trial he finds that he has lost time and money with no established strain in the end.

A FEW WORDS ABOUT INCUBATORS

By Geo. Hausman, Hillsboro, N. D.

Many of the readers of the North Dakota Farmer are without doubt thinking of buying an incubator. Let us therefore try if we can assist them in doing so. Incubators are so numerous on the market in our days, that it is

quite a hard matter for a beginner to choose. It shall be our aim to give the readers of this article just a few things to bear in mind.

Do not be misled by the "hot air" advertisements, for all incubator concerns claim wonders of their machines—and as a rule a little too much. Let it, however, be understood all incubators hatch chicks, and some of them a good percentage, but the thing to look for, is strong, vigorous chicks, which can only be obtained from a good incubator. **We are of course taking it for granted that the fowls from which eggs were taken were strong and healthy.**

There are two kinds of machines on the market, the "hot air" and the "hot water." The hot air in our opinion is the best, and would be the only kind we could advise. The reasons for this are numerous. As we, however, do not care to go too much into details, let us state, that all standard makes of machines are hot air. By "standard" we mean such machines that have proven their superiority. Or to convince you still more, just look at the large poultry farms where nothing but hot air machines are in use. This reason alone ought suffice that the hot air machines are superior to hot water.

Now that we have made the statement that the hot air machines are best, let it also be understood that we do not say that all hot air incubators are good. A good machine costs money, but the best is cheapest in the long run. Buy a good machine—built out of good material, one that has nursery drawers, and one that has an up-to-date ventilating system. This last is very important. There must be a circulation of air in the egg chamber.

In operating, operate according to direction given with machines. The incubator company from which the machine is bought knows what its machine can do. Quite a number of machines differ on what is the proper degree of heat to run at, but run according to the directions.

In conclusion let us say, we cannot mention any certain make, as we cannot act as advertising agents for this territory. We have however, used both hot water and hot air and have found the hot air by far the better machine, at least for this territory. Let it be understood that we do not pretend to know it all, but the fact we want to impress upon the reader's mind is, that we believe in hot air machines, and know by our own

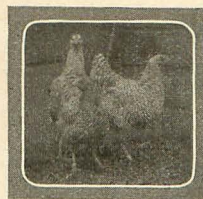
BARRED ROCKS

Choice Stock and Fair Treatment.

ROBERT B. REED

Box 2.

Amenia, N. D.



Plymouth Rock Poultry. Line bred from nation's greatest prize winners. Eggs at \$2.00 per setting. A few choice cockerels for sale at \$5.00 each.

H. C. Harty,
Bottineau, N. Dak.

Baby Chicks, 8 Cents Each. Shipped anywhere. Safe arrival guaranteed. Eggs for Hatching \$4.00 per 100.
Culver Poultry Farm, 1020 Reed St., Benson, Nebr

Silver Wyandotte Eggs, from Fargo 1, 2 Ribbon birds, \$3.00 per 13. From 300 hen flock, \$3.50 per 100 eggs. Baby chicks from flock, 10 cents each.
WYANDOTTE FARM
Woods, N. Dak.

BIRCH-LAWN POULTRY FARM
Alexandria, Minn. R. R.
S. C. W., R. C. W., S. C. B. Leghorns from good laying strains. Eggs, \$1 per 15. Toulouse Geese eggs, 30 cents each. Also Duroc Jersey Swine. Male Fowl for sale, all range stock.

Partridge Wyandottes

"Hardi-breds," A breed

which combines good laying quality with the finest table quality, to say nothing of unexcelled beauty.

My birds are from the Hadaway flock direct and among them is a son of "Boston". They are blocky, well marked and of trap-nested ancestry.

Some stock for sale at reasonable prices. Eggs: \$3 per 15 or \$5 per 30. Cash with order.

GEO. J. CHILDS, Casselton, N. D.

HAUSMANN POULTRY FARM
Breeders of W. Wyandottes and S. C. W. Leghorns
Hillsboro, - North Dakota

EGGS for hatching from 26 leading varieties. Bronze and W. Holland Turkeys. Pekin ducks and chickens. Catalog free. **L. GULDEN, OSAKIS, MINN.**

MAMMOTH BRONZE TURKEYS

I have a few very fine toms for sale yet.
JOHN F. SIMON, Oberon, N. D.

MAMMOTH BRONZE TURKEYS
from winning stock
EDGEWOOD FARM, R. F. D. 2, Fargo, N. D.

S. C. W. LEGHORNS

Prize winners' stock for sale. Eggs a specialty. **GEO. A. FOWLER, Box 486, Casselton, N. D.**

Rose Comb Black Minorcas
Eggs for sale, \$2 for 15 eggs.
C. WYSH, CASSELTON, N. D.

Thirty Prizes At State Show
White Barred and Buffed Rocks. First on Pens of these Farmers' Favorites. White and Buff Wyandottes Eggs from Price Pens \$2.00 per 13.
H. P. COOPER, Casselton.

IF INTERESTED IN BEES, POULTRY OR DAIRY
You should read **MODERN FARMER** Eldon, Mo.
10 Months For Only 10 Cents

GRAND 5-YEAR OFFER, PAGE 20

experience that they are better than the hot water in our state.

LARGEST POULTRY FARM

The largest poultry farm in the world is located at Compton, R. I., and is owned by Isaac Wilbur. Shipments of from 130,000 to 150,000 dozen eggs are annually made. He has 100 chicken houses, each 8x10 or 8x12 feet in dimensions and placed about 150 feet apart. They are in long rows on gently sloping fields. To feed he loads a low wagon, which is driven to each house. Feeding is done twice every day. The eggs are collected every afternoon.

CAPITALIZING THE HEN

It is claimed that the average production of a hen is 200 eggs per annum, but it is safe to assume that the actual is much below this figure. Adopting the very conservative figure of 120 eggs per annum, we find on the above basis of production there are 150,000,000 laying hens in the United States responsible for the production of 18,000,000,000 eggs.

At the farm price of 20 cents per dozen the total income derived from each hen

EGGS! EGGS! EGGS!

Our Varieties

White Plymouth Rocks,
Canedays.
Barred Plymouth Rocks,
Bradley's, Aristocrats &
Ringlets.
Buff Plymouth Rocks,
Golden Nuggets.
White Wyandottes,
Fishel's and Keeler's
Buff Wyandottes,
Hess.
Partridge Wyandottes,
Hadaway's.
Columbian Wyandottes,
Tompkin's.
R. C. R. I. Reds,
DeGraff's.
Black Langshans,
Crystals.
Buff Leghorns,
Pure Gold.
Buff Cochins,
Blue Ribbons.
Buff Cochins Bantams.

Send in your orders early if you want eggs. We are already booking orders for next month.

Our Prices are Reasonable

Write us for our prices and see

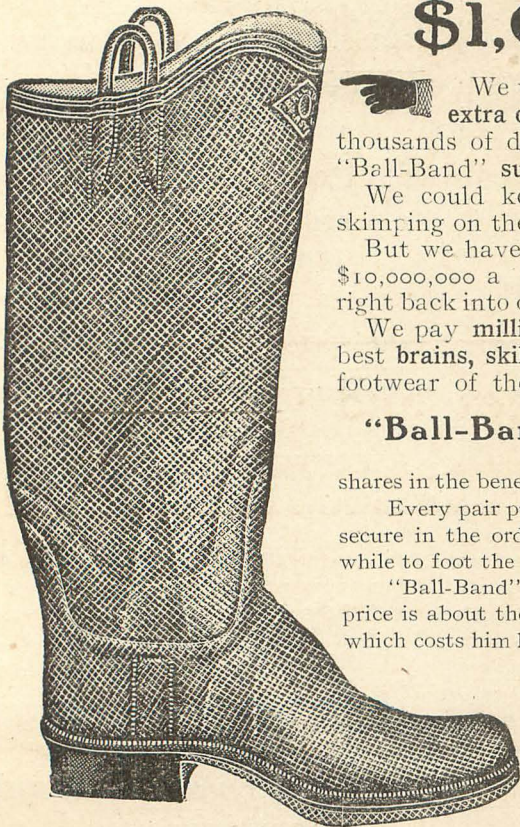
We have only a few cockerels left; so if you want one, be sure and order early before they are all gone.

Casselton Poultry Association

CASSELTON, NORTH DAKOTA

Look on Page 11 for Awl Premium

Get Your Share of the \$1,000,000



We will distribute this year, in the form of extra quality in rubber footwear, hundreds of thousands of dollars which we are glad to pay for "Ball-Band" supremacy.

We could keep for ourselves this huge sum by skimping on the quality.

But we have built up the "Ball-Band" business to \$10,000,000 a year by putting much of our profit right back into our product.

We pay millions to get the best rubber, and the best brains, skill and machinery to fashion it into footwear of the highest quality. Every buyer of

"Ball-Band" Rubber Boots, Etc.

shares in the benefits of this liberal policy.

Every pair purchased gives a longer term of satisfactory wear than the same sum will secure in the ordinary brands of rubber footwear. Therefore we consider it well worth while to foot the big bill for extra quality.

"Ball-Band" products cost the dealer a little more than many other brands. The retail price is about the same and the temptation is sometimes with the dealer to sell the brand which costs him less, as the immediate profits are larger. Many dealers, however, see that it is profitable in the long run to have satisfied customers, and consequently sell "Ball-Band" in preference to all others.

Always look for the "Ball-Band" Trade Mark—the little Red Ball which we place on every pair as a guarantee of quality and as a protection to you. This same Trade Mark appears on our Lumbermen's Socks, Knit Boots and Arctics.

This Trade Mark also identifies our famous All-Knit Wool Boots and Socks—the most durable woolen foot-wear in the World.

"BALL-BAND"

**NOT MADE
BY A
TRUST**

TRADE MARK

Look for this on the Heel.

GET THEM OF YOUR DEALER

Mishawaka Woolen Manufacturing Company, Mishawaka, Ind.

"The House That Pays Millions for Quality"

annually would amount to \$2. Allowing 40 cents for maintenance and 10 cents for depreciation, which latter would wipe out the market value of the hen in four years, irrespective of salvage when the period of production is over, the net profit per hen per annum amounts to \$1.50.

This profit, according to Wall Street standards, capitalized on a 5 per cent income basis, would place a nominal value of \$30 on each hen. For the 150,000,000 hens this would amount to the enormous total of \$4,500,000,000.

That the American hen can return a yield of 5 per cent per annum on a capitalization of \$4,500,000,000 appears nothing short of remarkable, but such is the case. The entire outstanding capital obligations of the railroads of the United States in 1907 were less than four times this amount, or \$16,082,146,683, while the total paid out in interest and dividends represented but 4.05 per cent of this amount.—Wall Street Journal.

MILO FOR FEEDING POULTRY

Many poultrymen, says H. M. Cottrill, of the Colorado A. C., prefer milo to corn for feeding poultry. The seeds are of convenient size for feeding and the composition is nearly the same as that of corn.

Dry land farmers in eastern Colorado state that, in an average season, they can raise a ton or more grain to the acre by planting carefully-selected milo seed and giving it thorough cultivation. It is their surest feed grain crop.

The heads of milo may be snapped off when ripe and fed, without threshing, to all kinds of poultry. It gives the fowls good exercise to pick the grains off the heads.

Milo has a stem with a crook-neck, and some poultry growers place a wire or slat along one end of the poultry house and hang the milo heads on it by the natural crook. The heads are hung at such a height that the fowls have to use some effort to reach them.

When threshed milo is fed to poultry, the small seeds should be scattered in a litter so that the birds will have to scratch for them.

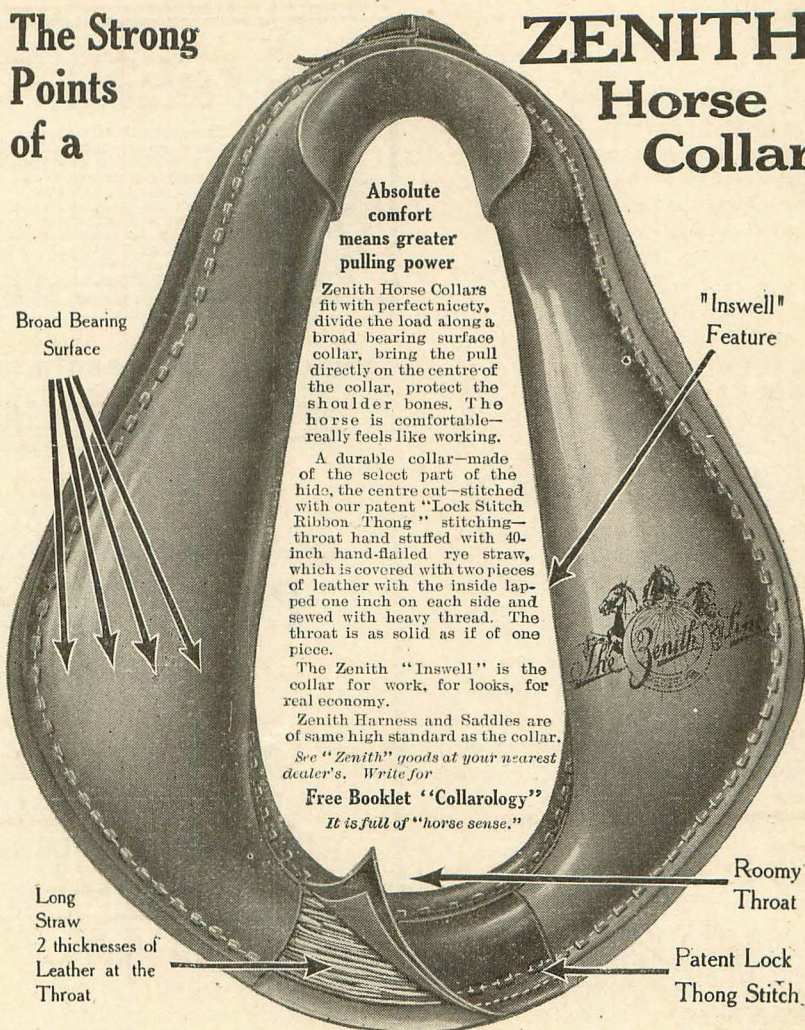
Milo is a constipating feed, and where it forms a considerable part of the winter ration of poultry, some succulent feed should be given, such as culled potatoes, stock melons, stock beets, or green cured alfalfa hay.

GROCERIES

Buy at wholesale and save money. Write today for free catalog 103. GRIGGS & CO., ST. PAUL

The Strong Points of a

ZENITH Horse Collar



Marshall-Wells Hdw. Co.

DULUTH, SPOKANE and PORTLAND

Dept. C.

Seeds, Trees and Gardens

C. B. Waldron, N. D. A. C., Editor.

COMPASS CHERRY

Please tell me thru your paper what you think of the Compass Cherry Plum to be planted on creek bottom land here.

G. S. Bowdish, N. D.

Answered by C. B. Waldron

The Compass Cherry, which is one of several crosses between the Wild Plum and Sand Cherry, makes its best growth upon rather moist, rich, heavy soil. It is much inclined to over-bear, and when planted upon light soil it exhibits this tendency to almost a fatal degree.

We find that on account of their tendency to overbear at an early age the

trees are apt to be short-lived. This can be overcome to a degree by giving them high cultivation and thinning out the fruit.

WILT RESISTANT FLAX

From a paper by H. A. Bemis, Finley

There is one great drawback to the successful raising of flax and the consequent stability of agriculture in the northwest and that is wilt. This is caused by a microscopic organism which saps its life blood. No one can estimate the amount of damage this invisible parasite has done and is like-

ly to do. Is there no remedy? Yes, if your land is not infected, treat your seed with formaldehyde the same as you do your wheat, but the wilt germ has spread everywhere in old fields where flax has been raised for a term of years and lives from year to year in the humus of the soil. Must we ultimately give up the raising of flax? No, not if "resistant flax" continues to grow where ordinary flax dies. What is resistant flax? As its name indicates it is a flax that resists. Resists the onslaughts of its destroyer, the deadly germ, that causes it to wilt and die. How can this be possible? I cannot tell but I know it is true.

But says one, "Furnish your proof and we will believe you."

Here it is: This picture which I hold in my hand is an actual photograph of this flax taken by myself when it was in blossom. The adjoining field of common flax was destroyed by wilt, a portion of which is shown in the foreground. Where did you get your seed and how was it originated?

The seed was originated by our own Henry L. Bolley and the A. C. donated fourteen pounds to me in the spring of 1908. As to how it was originated is an interesting story and can best be told by Mr. Bolley himself. The survival of the fittest, I believe tells the story in a nut shell. From that fourteen pounds I raised nineteen bushels machine measure, seventeen bushels of clean seed, or one bushel and twelve pounds for every pound of seed last year. I sowed that seventeen bushels on about thirty acres, including about eleven acres where the flax was plowed up the year before. I paid for threshing 145 bushels which included probably 100 pounds of weed seed. Did it successfully resist the wilt this year?

When it was growing I discovered some patches that did not seem to be making good. I sent some of this to Professor Bolley who, after having it analyzed pronounced it flax canker, which had made its appearance in several parts of the state. It had even resisted this new disease to such a degree that after the main stalk of one sample I examined had died down it sent up three other stalks, tho shorter, which blossomed and matured seed. I am only one of the forty odd farmers scattered over the state who have been assisting Professor Bolley in this great work—the work of helping to make stable and profitable the farming interests of the great northwest. The only question in my mind is whether this flax will continue year after year to hold its power of resistance, Professor Bolley the originator is himself so well satisfied that he has given it the name of N. D. R. 52 or North Dakota Resistant, No. 52.



12 Hardy Blizzard Belt Strawberry Plants FREE!

Everybody likes strawberries and to prove that our "BLIZZARD BELT" plants are the strongest rooted and heaviest fruited, we offer to send ONE DOZEN selected plants to you FREE OF CHARGE. We picked 35 quarts of fine fruit from a test bed of but a dozen strawberry plants set the year before. You can do as well. If you care to send 10 cents for mailing expense, we will add 6 BABY EVERGREENS 2 years old and send all to you at proper planting time. Write to-day and we will enter your name for the plants and send you our CATALOGUE and BARGAIN SHEETS of HARDY "BLIZZARD BELT" fruits by next mail. Address

THE GARDNER NURSERY COMPANY, Box 238 Osage, Iowa.



Northern Minnesota and North Dakota Grown SEED CORN---CLOVER---GRASS SEED AND SEED GRAIN

N. J. OLSEN CO.,

Moorehead, Minn.

Peas Clover Corn

North Dakota grown seed. Send
for catalog

PURE VELVET CHAFF WHEAT
CHOICE ALFALFA

FARGO SEED HOUSE, - - - Fargo, N. D.

A NEW POTATO DISEASE

The wart disease is a new enemy of the potato crop which is attracting great attention in Europe, and which is liable to be introduced into the United States at any time. It affects the tubers, forming large rough unsightly warts, and, in severe attacks, completely destroys the crop. Once the fungus gets into the soil, it is impossible to grow a crop of potatoes on the land for several years.

The fungus which causes this disease was discovered in 1896 in potatoes grown in Hungary. It is now prevalent in many places in England and there is great danger that it may spread to Ireland. It is also found in Germany and some other European countries. It has been carried to Newfoundland, but has not yet appeared in the United States.

It is spread by using affected potatoes for seed, and, as this country imports considerable quantities of potatoes every year, there is danger that it may be introduced.

The U. S. Department of Agriculture has recently issued a circular (for free distribution) giving a brief account of this disease.

FRUIT GROWING ON THE GREAT PLAINS

The Great Plains of the West is not naturally a favorable region for fruit

growing on account of the lack of moisture. But, as the great majority of settlers in the region must either grow a supply of fruit for home use or do without it, the U. S. Department of Agriculture has made a careful study of the possibilities in the case, and has issued a circular on "Fruit Growing for Home Use in the Central and Southern Great Plains."

This investigation has shown very encouraging possibilities for the growing of apples, cherries, plums, grapes, gooseberries, and currants, and, in the southern part, peaches and pears. Where irrigation is possible, fruit growing is comparatively easy, but in the Great Plains, irrigation can only be depended on in exceptional localities. Conservation of the scant rainfall must be the main dependence. Much depends on using the most favorable location, selecting the most suitable varieties, cultivation and manuring of the soil, etc.

The circular referred to above (which is for free distribution) discusses all phases of the question, and gives many helpful suggestions.

CHERRY TREES TO GO

Secretary Wilson of the Department of Agriculture has ordered the destruction of the 2,000 Japanese cherry trees recently presented by the municipality of Tokyo to the government for decor-

ative purposes in the park bordering the Potomac River in Washington.

Every possible care and precaution were taken in the handling and shipment of these trees after their arrival in America, and the packages reached Washington in excellent condition on January 8. Reports of the entomologists and plant pathologists showed the roots to be badly affected with root gall-worm, fungus disease and insect pests, some hitherto unknown in this country, whose introduction might result in enormous detriment to trees and agriculture generally.

A SPRAYER



Spray Your Fruit Trees and Vines with the Comet Sprayer

Price, \$3.50 to \$4.00

Agents Wanted

We have demonstrated to the satisfaction of farmers and fruit growers that a heavy, clumsy apparatus is not necessary and that the Comet Pump, costing only \$3.50 to \$4.00, will spray a tree as effectively as any sprayer on the market, and we claim superiority in simplicity, durability, price, effective work and ease of operation. All Brass. Double Acting. Throws continuous stream 50 feet or spray as fine as a mist. The fruit saved from one choice tree will more than pay you for the sprayer. We can please you and a postal card will bring you full particulars. Agents Wanted. Address The H. B. Rusler Mfg. Co. Dept. 23 (2) Johnstown, Ohio

THE DEVILS LAKE NURSERY

Devils Lake, North Dakota

Sells Hardy Nursery Stock raised on the Dakota prairie for prairie planting. Forest, Fruit and Ornamental Trees, Seedlings and Cuttings. Shrubs and Flowers, Small Fruits.

Send for Catalogue and Prices. Having no Agents, we save you Agents' Commission.

Northern Grown stock is hardy. Address,

Devils Lake Nursery
Devils Lake, N. D.



50 BULBS
25 Cents.

Will grow in the house or out of doors. Hyacinths, Tulips, Gladioli, Crocus, Fuchsias, Oxalis, Tuberoses, Begonia, Jonquils, Daffodils, Chinese Lily, Dewey Lily, Gloxinia, Lilies of the Valley—all postpaid, 25c. in stamp or coin. As a premium with these Bulbs we will send FREE a big collection of flower seeds—over 200 kinds.

CEDAR NURSERY, Winter Hill, Mass

SEED OATS

Ferguson's Special No. 1 White Early New Market Seed Oats. Has sprangley, heavy heads, large plump berry. Northern grown. Yield 1909, 75 and 100 bushels per acre. Ripens two weeks earlier than ordinary oats. Weighs 50 pounds per bushel. Send 12c. in stamps for sample.

THE P. L. A. FERGUSON CO., SEEDSMEN,
516 Nicollet Ave., Minneapolis, Minnesota.

ORCHARD FRUITS IN THE BLUE RIDGE

Virginia, and in fact most of the states along the Blue Ridge Mountains have, of recent years taken wonderful strides in fruit growing. Fruit growing in these regions, however, is only slightly developed in comparison with the possibilities which exist in this direction. The methods of orchard management are commonly faulty and not productive of the best results which the natural advantages make possible. Notwithstanding these conditions, large quantities of excellent fruit, but principally apples, are grown in some portions of these regions.

Realizing the problems that many orchardists will find confronting them, the Department of Agriculture has published a bulletin entitled "Orchard Fruits in the Piedmont and Blue Ridge Regions of Virginia and the South Atlantic States," and while the information supplied therein will doubtless prove of value to prospective planters of orchards who already reside in these regions, it is expected that its greatest usefulness will be to those who are unfamiliar with the conditions, but who may be attracted to these sections by the opportunities which they offer for fruit growing. The hints are also applicable to other sections made up of hill and valley and where soil and other natural conditions may be similar.

There appears to be no doubt but that the success of fruit growing in the Blue Ridge mountains is due in great part to the fact that the orchards are planted on the sheltered side of the numerous knobs which dot the chain from end to end and thus in measure protect the trees from winter killing or hold back the buds until all danger of spring frosts has passed.

PURE SEED LAW

There appears to be considerable misunderstanding regarding the labeling required by the North Dakota Pure Seed Law. Persons selling, offering or exposing seeds for sale must label each and every package or container with a plainly legible label. The label may be either printed or written. It must show: (1) The commonly accepted name of the kind or variety of seed; (2) the full name and address of the person or persons, firm or corporation selling, offering or exposing the seed for sale. Every person buying seed should be interested in seeing that such proper label is attached. In the case of mixed seeds the label should show the correct common names of the kinds or varieties of seeds composing the mixture.

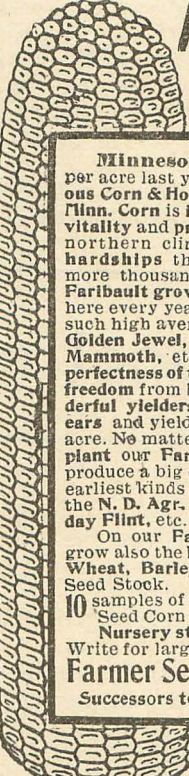
If the seed is unclean, that is to say, not ready for sowing, it should be labeled "Uncleaned Seed," and such un-

WE WANT MEN
LIVE MEN ONLY
TO SELL THE
Hardest of All Trees
Grown on the Dakota prairies.
Salaries or commissions paid weekly.
The Northwest Nursery Co., Valley City, N.D.

Kubanka No. 5639 Duram Seed Wheat For Sale

Original seed from Prof. Shepard. Grown on new land. \$1.30 per bushel. Ten bushel lots or more \$1.20, cleaned. Sacks, 20 cents.

GEO. LIPPMAN, Granville, N. D.



MORE CORN THAN IOWA

Minnesota raised more Corn per acre last year than Iowa, the famous Corn & Hog State. Why? Because Minn. Corn is impregnated with vigor, vitality and productiveness of our cold northern climate and stands more hardships than other corn; furthermore thousands of bus. of our famous Faribault grown Seed Corn are planted here every year, which helped to score such high average. Such varieties as Golden Jewel, Silver Jewel, Rice Co. Mammoth, etc. we have bred up for perfectness of type, early maturity and freedom from barrenness and are wonderful yielders. Produce good sized ears and yield from 85 to 125 bus. per acre. No matter where you are located plant our Faribault grown Corn and produce a big crop. We grow also the earliest kinds for the extreme North. the N. D. Agr. College Golden Dent, 60 day Flint, etc.

On our Faribault Seed Farms we grow also the best kinds of Seed Oats, Wheat, Barley, etc. from pedigreed Seed Stock.

10 samples of the best kinds of Seed Corn & Seed Grain for 10c.

Nursery stock at wholesale prices. Write for large illustrated seed book.

Farmer Seed & Nursery Co.,
Successors to FARMER SEED CO.,
333 8th Avenue,
Faribault, Minn.

RAISE GRAPES AND STRAWBERRIES

No more care than ordinary garden plants

\$1 supplies ordinary family

4 two-yr.-old Grape Vines or 50 Strawberry Plants, well rooted. Guaranteed to grow if our simple directions are followed. Send postal for booklet "How to Grow Grapes and Strawberries in the Northwest."

R. W. WILCOX CO.
PAW PAW, MICHIGAN.

TREES FOR WINDBREAK, Shelter, Shade, Ornamental Hedge and Fruit.
Send for free sample of our Extra Early Sweet Corn.

HOLLAND NURSERY
Bismarck, North Dakota

cleaned seed should not be sold or delivered without the previous consent of the purchaser. It is evident that the law simply wishes to protect purchasers from being deceived. Therefore, if seedsmen will name on the label exactly what weed seeds are in the seeds offered he need not label the seed "Uncleaned." Seeds which the seller is willing to guarantee as clean, within the meaning of the law need not be labeled other than with his name and address and the name of the seed.

Those who are buying seeds should remember that, if labeled "Uncleaned Seed" it is probable there is something in the package which is undesirable. They should, therefore, satisfy themselves, either by their own tests or by tests made elsewhere, as to the nature of the seeds which are present or as to the germination.

The State Seed Control Laboratory makes purity and germination tests for any citizen of the state free of charge

provided the sender of the seeds accompany the same with a signed statement showing from whom he obtained the seeds and when.

We will always be pleased to examine any samples in which there is doubt as to quality. Now is the time to test your flax, corn and other seeds. If you wish the Laboratory to help you, do not wait until planting time.

H. L. Boley.

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TELESCOPE
RINGS
WATCH
EVERY BODY'S SAFETY RAZOR
FOUNTAIN PEN
CAMERA AND OUTFIT
PRINTING PRESS

EASY TO EARN You choose of 150 premiums for selling our **Keystone Easy-to-Thread Best Quality GOLD EYE NEEDLES** at 5c. a package. With every two packages we give **FREE** silver **Aluminum Thimble**. Send name and address. We send, postpaid, 24 needle packages and 12 thimbles with **LARGE PREMIUM BOOK**. When sold send us \$1.20 and receive premium entitled to, selected from premium list. Extra present **FREE** if ordered today. Address **Keystone Novelty Co., Box 715 Greenville, Pa.**

FOR HOME CONSUMPTION

To bake cabbage so that every one in the family will like it: First cook it tender in salted water, changing the water twice. Then chop it, put it into a buttered baking dish, turn a cupful of white sauce mixed with grated cheese over it, cover the top with buttered bread-crumbs, and bake until the top is a delicate brown.

To make good tea: Fill the teakettle with freshly-drawn cold water, bring it quickly to a bubbling boil. Put a teaspoonful of tea (for each cup desired) into a porcelain pot which has been warmed. Pour the hard boiling water over the tea leaves and let it steep for three or four minutes,—no longer; then pour off the tea into another heated china pot. Do not use the tea leaves again.

To can beef: Cook until tender so that the fibers will break apart. Season and cut into small pieces; boil the gravy until so thick it will jelly when cold. Discard all pieces of gristle and with a wooden masher press the meat, a little at a time, firmly into hot jars. Then pour in enough gravy to fill all the places around it,—not enough to float the meat, but to cover it. Then add more meat and gravy till the jars are filled within an inch of the top; and see that there are no air spaces between the pieces. Then fill the jars to overflowing with boiling melted suet, and seal, using new rubbers with tested jars.—From February Farm Journal.

LESSONS IN ELEMENTARY AGRICULTURE

By G. W. Randlett, Agricultural Col.

Selecting and Testing Seeds

Like produces like in the vegetable world as well as in the animal. There are always individual plants like individual animals that are strong and vigorous, capable of withstanding disease, and likely to produce larger amounts of ripened grain. These are the plants from which seed should be selected for sowing or planting. Pure bred animals are nothing more than the results of just such careful selection of the very best for a long period. There are pure bred varieties of corn, wheat, oats, and all kinds of farm crops just as there are pure bred Clydesdales, Herefords, Shropshires, Berkshires, or Wyandottes.

On the other hand there are always individual plants that are small and weak, liable to the attacks of rust, smut, and other fungus diseases, and consequently yield a small amount of inferior shriveled grain. This may be called "scrub" grain just as animals with no particular breeding are known as scrubs.

Pure bred animals are very expensive and hence the majority of farmers think they cannot afford to purchase even a

School and Home

MINOT

Callin' up the town sites that I've seen
o' late,
Circumambulatin' 'round the
froze-
up
state,
Summin' up the items o' welcomes that
I've seen
Since the grass o' 1903
fust
got
green,
Take my affirmation that I've simply
got
Overwhelmin' figures fer
glad
Mi-
not.
All the "big bugs" met there—one of
'em wuz me—
Learned delegation from the
whole
coun-
tree,
Readin' sleepy papers to a gapin' crowd,
Showin' off our mightiness
right
out
loud.
But the folks forguv us right there on the
spot,
Made us more than welcome
to
their
Minot.

A. B's and M. A's, all of us wuz there,
D. Ph. and D. D., taintin'
up
the
air,
But the town looked kindly on our deep
distress
Jest as if we hadn't this
D—
Ph—
ishness.
An' I want to tell ye, if ye have fergot,
Kindness has her palace in
this
Mi-
not.
Sodom and Gomorrah, these have had
their day;
Fargo's aristocracy,
gone
that
way.
Babylon an' Nineveh, buried in the sea,
Grand Forks, Bismarck,
Pom-
pe-
ii,
Try em' if you're lookin' fer a quiet spot;
I prefer the lively, livin',
glad
Mi-
not.
—Floyd D. Raze.

few animals to form the foundation of a herd. The foundation stock for the beginning of pure bred seed growing is a different matter. This costs so little that any farmer can afford the initial cost, or the expenditure may be made by the boy on the farm and the beginning of a profitable branch of the farming business begun.

In the case of wheat the following varieties are considered the best: Minnesota No. 163, a fife, and North Dakota No. 66, also a fife, Minnesota No. 169, a blue stem, and Arnautka, a durum. North Dakota Station No. 871 is an excellent variety of barley. Station No. 666 or 60 day and White Russian are among the best recognized oat varieties. The former is an early maturing kind and the latter, late. Station No. 155 is a very desirable kind of flax, being a good yielder and tests high in oil, while Station No. 959 is the best variety of winter rye for this state.

The following paragraph, explaining the method of securing pure bred seed in sufficient quantity to seed a large farm, is taken from an article written by Supt. W. R. Porter for recent publication.

"Any farmer in the state can obtain and grow pedigreed seed of a pure strain on his own farm if he so desires. Should he only obtain a bushel of pedigreed seed wheat and if he sows it on an acre of ground in 1910, he should harvest from 15 to 30 bushels of wheat in the fall. If he puts it on good land and

market for seed. A bushel of barley, oats, or flax will produce an abundance of seed for the average farm in from two to three years if grown exclusively for seed purposes as described for wheat."

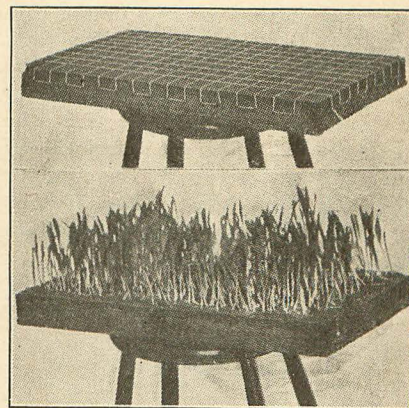
In the preparation of the seed grain the fanning mill should be used freely. The mill, if correctly made, will not only take out chaff, pieces of straw, etc., but will remove weed seeds as well and if a strong air blast is used will blow over the smaller and lighter portions of the grain. The part selected may be less than one-half of the amount put into the mill, but it will be made up of seeds of the largest and strongest type, indicating that they were borne on the most vigorous plants and hence capable of reproducing other vigorous plants. In this way many of the weed seeds and disease pores will be screened or blown out. There will always be plenty of weeds and plenty of disease without encouraging their growth.

Some seed grain, especially corn, should be tested for viability before planting. There are several ways in which this may be done. Descriptions of three different devices are given below:

1. Place a layer of sand one-half inch to one inch deep in the bottom of a pie tin or other shallow dish, cover the sand with a layer of blotting paper. Now count out one hundred of the seeds to be tested, place them as far apart as possible on the paper, cover the seeds with another layer of blotting paper and

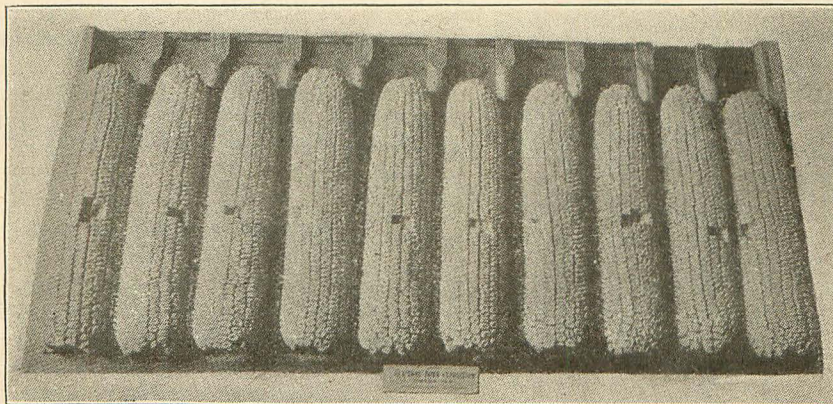
edges. Cover with a still larger pan and at the end of four days examine for results.

3. Special device for testing individual ears of seed corn: Fasten two boards together with cleats and trim to twenty-five inches square, nail strips of lath to the edges making a box one inch deep, fill with moist sand. Now mark off two and one-half inch spaces all around the outside and drive a carpet tack in each mark, leaving the head projecting far enough that a string may



Plan No. 3

be tied to it. Fasten the end of a ball of wrapping twine to the first tack and pass the twine back and forth until the entire surface of sand has been divided into two and one-half inch squares. Take one hundred ears of corn to be tested and number them so that the ear number corresponds with the number of a square in the tester. Now take five kernels from different parts of ear No. 1 and plant them in space No. 1 of the tester, planting one kernel in the center and one in each of the corners of the square. Do the same with the other ninety-nine ears. At the end of a week some squares will show five vigorous young corn plants while others will show but one or two weak puny plants or perhaps none at all. Now the ears giving the good test can be used for planting and the others discarded. This method practically insures a good stand of corn. This may seem like a lot of work but one hundred ears of corn will plant quite a large field. A good ear of North Dakota corn weighs about one-half pound. If one bushel plant seven acres it is easy to determine how large a field may be planted from one hundred ears. This is the method employed by many of the successful corn growers in the corn belt.



Ten of the Very Choicest Ears

treats it right, he would have from 10 to 25 bushels of good seed wheat after he cleaned it thoroly from small kernels and foreign matter. This would seed from 10 to 25 acres in 1911 which would yield from 150 to 750 bushels in the fall, and if cleaned up properly he would have from one hundred to six hundred bushels of clean pedigreed wheat. In 1912 he would have enough seed to sow from one to six hundred acres and from that time on he would have all the pure pedigreed seed he wished to sell on the

saturate with water. Cover the whole with an inverted dish to prevent evaporation. Keep reasonably warm and moist for four days and examine for results.

2. Invert a small pan or basin inside another slightly larger one. Pour water into the outside pan till the edges of the inverted one are submerged. Cover with a double layer of cotton flannel between the folds of which the hundred seeds are deposited. The cloth must be large enough to dip into the water at the

Fargo, N. D., March 5, 1910.
North Dakota Farmer:

The combination of consumers in the east is bringing forcibly to the attention of the producer in the west, the question of what he will do to protect himself.

The consumers already by their organizations have been sufficiently powerful to force down the price of farm products, thus having had a taste of power in this direction, what is to prevent them from carrying the campaign further?

Not only this, they are likely to oppose in the future the attempts of the grain grower to obtain a living profit.

What is the remedy? Organization by the farmer, this he must do if he would save himself from destruction. There is plenty of evidence to show that the people in the big cities do not care anything about the conditions that effect the farmer, or farm life, and the worst of it all is that they do not seem to evince a disposition to study the problems that confront the farmer and give him a square deal. The time for temporizing has past. The farmers must act quickly and in no uncertain manner.

Yours very truly,

H. Batchelor,

FARM EQUIPMENT

By L. W. Ellis, Dept. of Agriculture

A recent graduate of the Ohio State University, before engaging in farming on his own account on a portion of his father's farm, kept in mind for four or five months the problem of getting a complete equipment within his means. He first noted all the items which he considered necessary, basing his list on his previous experience. His second step consisted of the task of obtaining the net retail prices of the various articles. The result was a total so large that the third and most difficult step, that of determining the actual necessities, was pursued for a considerable time. Having finally reduced his list to the minimum, he entered into negotiations with several of the local merchants. Two of these made special efforts to obtain his order, and each made the suggestion that he take a trip at the merchant's expense to one of the cities in the State and select his equipment from the large stocks in the wholesale supply houses. He accepted one of these offers, and during the state fair spent a half day in a large warehouse selecting articles of suitable quality. The goods were shipped to the local dealer, who obtained his profit and still gave the purchaser a cash discount of 10 per cent from the ordinary prices. The young farmer brought his entire stock of miscellaneous equipment from the store at one trip with a team and wagon, and then spent a day or two arranging his workshop and disposing of his various purchases in the most convenient places, the extent of his outlay impressing him with the necessity for

taking systematic care of the smallest details. Several items which were not up to the standard were taken back and exchanged for perfect goods at the local store, and in this way the entire outfit was delivered at the farm with very little expenditure of time and annoyance and in perfect condition. By following this method the farmer was enabled to make his selection from well-known brands and from a larger stock than that afforded by the ordinary store, besides having a pleasant outing. His total purchase amounted to about \$125, a portion being for household use.

The following articles were charged against the farm business:

1 leather halter.....	\$1.65	1 handsaw.....	\$0.90
1 gallon of paint.....	1.50	1 hack saw.....	.40
1 gal. of barn paint.....	.85	1 compass saw.....	.25
1 bottle of mach. oil.....	.10	1 pair of pliers.....	1.00
1 small oil can.....	.05	1 pair of pliers.....	.30
1 leather punch.....	.60	1 post-hole digger.....	1.25
2 pairs of gloves.....	.20	1 screw-driver.....	.35
1 pr. shucking gloves.....	.50	2 shovels.....	1.20
1 shucking peg.....	.20	1 scoop shovel.....	.75
1 riveting machine.....	.50	1 plast'ng trowel.....	.62
1 soldering iron.....	.30	2 wedges.....	.40
1 crowbar, 16 lbs.....	.64	1 fork, 3 prongs.....	.65
1 center punch.....	.10	1 whetstone.....	.05
1 draw knife.....	.60	1 mail box.....	1.00
1 garden hoe.....	.35	1 wagon jack.....	1.00
1 grindstone.....	3.75	1 bucket.....	.65
1 buggy robe.....	8.00	1 set ladd'r irons.....	1.35
1 bl'ksmith's vise 5in.....	6.00	12 bolts, 14-inch.....	.49
1 tamper.....	1.00	1 horse blanket.....	3.00
1 pr. scales, 600 lbs.....	11.00	1 whip.....	.25
1 oilstone.....	.50	1 monkey wrench.....	.40
2 gal. harness oil.....	2.00	1 alligator wrench.....	.25
1 jack plane.....	2.00	1 paint brush.....	.15
1 paint brush.....	.65	1 seed sower.....	4.50
1 ratchet brace.....	1.75	1 saw-set.....	.60
1 bit, one qr. in.....	.20	1 log chain, 15 ft.....	1.72
1 bit, 5-sixteenths.....	.20	1 ax and handle.....	1.00
1 bit, 7-sixteenths.....	.20	1 boy's ax.....	.75
1 bit, one-half inch.....	.25	1 cold chisel.....	.20
1 " 10-sixteenths.....	.30	1 chisel, 3/4 in.....	.30
1 " 12-sixteenths.....	.30	1 chisel, 1 inch.....	.35
1 bit, 1-inch.....	.40	1 rope, 1/2-in, 50 ft.....	.55
1 handsaw.....	1.75	1 hoisting block.....	2.50
1 tinners snips.....	.35	1 pick & handle.....	.60
1 road scraper.....	5.00	2 bx. copper rivets.....	.20
1 steel square.....	.85	2 boxes of tub. riv.....	.10
1 nail hammer.....	.75	1 spade.....	.60
1 ball peen hammer.....	.75	1 ditching spade.....	1.00
1 jackscrew.....	2.25	1 snath.....	.75
1 pipe wrench.....	1.50	1 scythe.....	.75
1 currycomb.....	.20	1 wheelbarrow.....	1.75
3 clevises.....	.24	1 hay knife.....	.75
1 cross't saw & handle.....	2.80	1 feed basket.....	.80
5 files.....	.75	1 pr. of nippers.....	.75
1 grub hoe.....	.45	1 sledge and hand.....	.90
1 garden hoe.....	.35	3 quarts of paint.....	1.15
1 horse brush.....	.45		
1 horse brush (for tail).....	.15		
1 hatchet.....	.75	Total.....	106.86
1 lantern.....	.90	Les 10% cash dis.....	10.69
1 fork, 4 prongs.....	.60		
1 punch.....	.10	Net cost.....	96.17

Few farmers realize the extent of their investment in small items of equipment or the time and inconvenience involved in buying numerous articles singly or in small lots. Before planning the farm equipment, due consideration should be given to the necessary outlay for minor items, and where possible the

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Prove for yourself in your own home, that the Kalamazoo is the most perfect—most economical—most satisfactory range for you to use—Your money back if it's not.

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Kalamazoo Stove Co.
Kalamazoo, Mich.

"A Kalamazoo Direct to You"

latter should be secured at one purchase, thereby saving time and, usually, money. The purchase of these articles in such a manner will mean a total expenditure sufficient to impress the farmer with the need for their systematic care.

LARIMORE FARMERS CLUB

The farmers and business men of Larimore, have a club organization that meets every week during the winter months. The purpose of this club is the study of farm topics and all problems that pertain to the betterment of the farm home. Supt. Hess of the city schools acts as leader. Out of town speakers are secured from time to time. On Feb. 15th Prof. W. C. Palmer, of the Department of College Extension, Agricultural College, addressed the club on the subject of "Clover Growing and Crop Rotation."

The Larimore Club is a decided success. It is creating a large and lively interest in agricultural matters at Larimore and attracting not a little comment from outside. The Agricultural College stands ready to lend a helping hand to any community starting a similar work.

HARD ON PROMISED LANDS

Louis Baldrusch and family returned yesterday after an absence of about two years. They are only too glad to get back to North Dakota. They sold their farm and personal property in this county and moved to Turner, Oregon, but were badly disappointed with everything there. Mr. Baldrusch says he never saw so many poor people as there, and they can't get away.

Mr. Baldrusch and family then moved to southern Alberta. This too proved a delusion and a snare. There dry farming methods are used, but not always with the best of success. Necessities of life are high and prices low.

The next move took them to Missouri, but again disappointment was in store for them. It takes too much money to get started there.

Mr. Baldrusch is now back and will

remain permanently. He says: "All that I have left, is the good sense enough to return."—Sykeston Tribune.

NORTH DAKOTA AND HER OPPORTUNITIES

Extract from a letter written by J. J. Hill to the City of Williston

You have a state of great possibilities. Last year you were second only to Minnesota in the production of wheat, and came within a little over three million bushels of overtaking her. Your soil and climate are suited to every kind of agricultural product grown in the temperate zone. You have taken your front rank among the states of the union after but a few years of existence as a state. Less than a generation covers the growth of this great commonwealth whose possibilities are even yet but half understood.

For what you have done is only a beginning. You are now entering upon the second period of development that marks the time of highest prosperity. The soil has been broken to use, markets have been established, all the machinery for the industrial and social organization of your people has been installed, and the next 10 or 20 years should see great changes and rapid progress. If you look at the statistics of growth of the older states to the east, in population, wealth, production and value of farm property within the last 20 years, you can, by applying the same ratio to your present condition, compute the good fortune that awaits you. North Dakota is going to pay a great profit to every man who has a stake there.

To make sure of this you have to do just what this occasion calls for. You must "get together." A stout heart and a united effort make up the secret success in all communities. Do not spread yourselves out too thin. The yield of wheat per acre in North Dakota in 1909 was below what it ought to be. This means that there is more wealth per acre waiting better cultivation; and it is part of the value of such gatherings as this that you can take counsel together how it may be done.

You can help one another with advice and experience. There is not a farmer who does not at some time learn something from his own work that would be of service to every other farmer. The exchange of ideas alone will give to the country the one advantage which the city now has in a greater measure. It is a good thing for the tillers of the soil and the merchants, bankers and other business men of the centers where they deal to get together also and compare notes.

Mayer

HONORBILT SHOES

The proper shoes for men:
shoes that *look, fit, feel and wear right.*

Made of *selected leather*—leather that is best by every test. Correct in style. Made by the finest shoe makers, in the best equipped factory in existence.

MAYER HONORBILT

shoes are "built on honor"—built for *combined style and service*—built for absolute satisfaction and lasting comfort. Biggest values you can ever hope to get for the money.

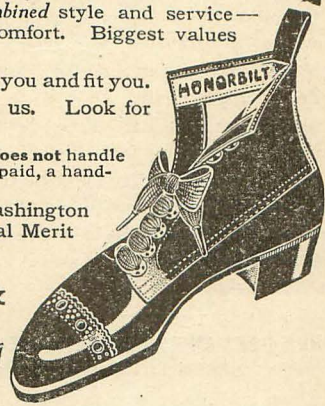
There is an Honorbilt style that will exactly suit you and fit you. Ask your shoe dealer; if he hasn't it, write us. Look for the *Mayer Trade Mark* on the sole.

FREE—If you will send us the name of a dealer who **does not** handle Mayer Honorbilt Shoes, we will send you **free**, postpaid, a handsome picture, size 15x20, of George Washington.

We also make Leading Lady Shoes, Martha Washington Comfort Shoes, Yerma Cushion Shoes, Special Merit School Shoes and Work Shoes.



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CATALOG 2 to 45 H. P. FREE. Our New Popular Educator LACKAWANNA "INSTRUCTION-TREATISE," explains gasoline engines for everyone. Send name and address and ten cents to cover postage, TODAY.

9 to 29 Coldwell St., Newburgh, N. Y.

LACKAWANNA MANUFACTURING CO.

For their future is one; and the big lesson which everybody has to learn is that the success of one part of the community is always conditioned upon and limited by the success of every other part.

There is really no limit to what you may do. Your state is one of the best in the union. Your people are alert, hard working and progressive. You are connected with all the great markets of the world. Your future is in your own hands. Do not be afraid of it. Study your soil and how to make the most from it. Stand the outlay necessary to preserve it in the best condition and assure a full crop. Cultivate and fertilize it with jealous care, according to the modern ideas taught in your own and other agricultural schools. Courage, hard work and economy are guarantees against failure.

Co-operation is the watchword in all material development today and it should be yours. Farmers and business men, country and town, capital and labor have to help each other. But the future belongs to the man on the farm. With the prices now prevail-

ing and likely to rule for some years to come, your prosperity is so sure that it is worth the hard work and the planning and the anxiety which may discourage you at times but are only the common lot of all those who carry any enterprise that is worth while to success.

A good state, a good people, a good opportunity; these are your materials to work with. A good spirit, too, has always distinguished North Dakota in the past. Avoid false prophets and self seeking demagogues. Acting on these lines North Dakota is going to give a good account of herself in the near future.

NORTH DAKOTA

Five Years' Material Growth

An increased population from 350,000 to nearly 800,000.

A public school enrollment from 98,000 to about 156,000.

A total increase in our population of 125% these past five years.

An estimated increase during the next five years of 75%.

ELLENDALE, NORTH DAKOTA

Counties with new railway activities contemplated, 33.

An increase of land values during these last 5 years, 106%.

Three Northwestern counties increased their population 1,000%.

Two Northwestern counties increased their population 600%.

Eight Middle West counties increased their population 100%.

North Dakota has 75,000 tillable farms at this present time.

These farms produced in 1909 an aggregate wealth of \$192,000,000.

Farmers have fewer mortgages, and are more prosperous than ever.

Merchants are financially sound, and collections are good.

Manufacturers had their best year, and are increasing for 1910.

During 1909 North Dakota took the lead over all other states of the Union east of the Montana line, in the value of farm products, save the states of Iowa and Nebraska.

WHEN DOES AN EGG CEASE TO BE FRESH.

Doctor Wiley, the sage of the Department of Agriculture, at a recent meeting of a Congressional Committee which is investigating the cost of food, was asked the question "When does an egg cease to be fresh?"

"That question," replied the Doctor, "I will answer, if you will tell me when a pig ceases to be a pig and becomes a hog?"

Incidentally the Chief Chemist not only explained, but demonstrated practically an infallible method of telling when eggs are fresh. He had a big glass beaker about three-quarters filled with a 10 per cent solution of table salt. Into this he dropped eggs. All the absolutely fresh eggs immediately sank to the bottom while the eggs that weren't quite so fresh floated a quarter or third out of the water.

He indorsed his method and said it was possible thereby to prosecute and convict any dealer offering cold storage as the "strictly fresh" country variety. Doctor Wiley stated that he now has only two inspectors supervising cold storage methods, but with 25 of them he believes it possible to keep a close watch over the industry all over the country, and with the adoption of regulations prescribing the length of time allowed to food stuffs to remain in storage, the public would benefit thereby.

He stated it as his belief that with a tank of suitable proportion egg storers could test 5,000 eggs at a time before placing them in storage, in order to determine the freshness of the product, for unless the egg is perfectly fresh before being placed in storage, it will deteriorate rapidly when placed upon the market.

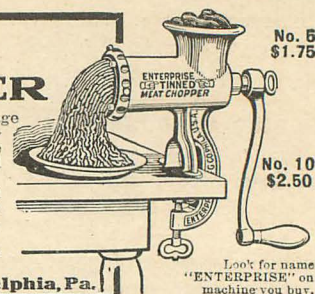
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OUR AWARD OFFERTAKES, PAGE 11

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